

Carsten Carlberg

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

309
papers

11,087
citations

57
h-index

89
g-index

329
ext. papers

12,226
ext. citations

6.8
avg, IF

6.74
L-index

#	Paper	IF	Citations
309	T Cell Immunity: T Cell Receptors and Their Effector Functions 2022 , 89-107		0
308	B Cell Immunity: BCRs, Antibodies and Their Effector Functions 2022 , 59-76		
307	Immunity to Viral Pathogens and the Virome 2022 , 135-154		
306	Innate Immunity and Inflammation 2022 , 19-40		
305	Immunity to Bacterial Pathogens and the Microbiome 2022 , 109-133		
304	Antigen-Presenting Cells and the Major Histocompatibility Complex 2022 , 77-88		
303	Tolerance and Transplantation Immunology 2022 , 155-169		
302	Adaptive Immunity and Antigen Receptor Diversity 2022 , 41-57		
301	Immunological Hypersensitivities: Allergy and Autoimmunity 2022 , 171-196		
300	Cancer Immunology 2022 , 197-213		0
299	Cells and Tissues of the Immune System 2022 , 1-18		
298	Vitamin D Treatment Sequence Is Critical for Transcriptome Modulation of Immune Challenged Primary Human Cells.. <i>Frontiers in Immunology</i> , 2021 , 12, 754056	8.4	1
297	Replacing Saturated Fat with Polyunsaturated Fat Modulates Peripheral Blood Mononuclear Cell Gene Expression and Pathways Related to Cardiovascular Disease Risk Using a Whole Transcriptome Approach. <i>Molecular Nutrition and Food Research</i> , 2021 , e2100633	5.9	1
296	Cancer Genomics 2021 , 55-66		
295	Tumor Suppressor Genes and Cell Fate Control 2021 , 29-40		
294	Cancer Immunity 2021 , 129-146		
293	Architecture of Cancer Therapies 2021 , 147-161		

292 Tumor Microenvironment **2021**, 101-114

291 Cancer Epigenomics **2021**, 67-85

290 Multi-step Tumorigenesis and Genome Instability **2021**, 41-53

289 Oncogenes and Signal Transduction **2021**, 17-28

288 Introduction to Cancer **2021**, 1-16

287 A hierarchical regulatory network analysis of the vitamin D induced transcriptome reveals novel regulators and complete VDR dependency in monocytes. *Scientific Reports*, **2021**, 11, 6518 4.9 7

286 Vitamin D and the risk for cancer: A molecular analysis. *Biochemical Pharmacology*, **2021**, 196, 114735 6 8

285 Aging and Cancer **2021**, 87-99

284 Metastasis and Cachexia **2021**, 115-128

283 An update on vitamin D signaling and cancer. *Seminars in Cancer Biology*, **2020**, 79, 217-217 12.7 33

282 Impact of Epigenetics on Complications of Fanconi Anemia: The Role of Vitamin D-Modulated Immunity. *Nutrients*, **2020**, 12, 6.7 1

281 Skin colour and vitamin D: An update. *Experimental Dermatology*, **2020**, 29, 864-875 4 14

280 Nutrigenomics: How Science Works **2020**, 3

279 Key Vitamin D Target Genes with Functions in the Immune System. *Nutrients*, **2020**, 12, 6.7 32

278 Genome-wide effects of chromatin on vitamin D signaling. *Journal of Molecular Endocrinology*, **2020**, 64, R45-R56 4.5 14

277 Chromatin Modifiers **2020**, 83-98

276 Insulin Resistance and Diabetes **2020**, 131-151

275 Interference of the Human Genome with Nutrients **2020**, 49-63

274	Heart Disease and the Metabolic Syndrome 2020 , 153-172		
273	Genome-Wide Principles of Gene Regulation 2020 , 71-82		
272	Basal Transcriptional Machinery 2020 , 19-33		
271	A Key Transcription Factor Family: Nuclear Receptors 2020 , 59-70		
270	Sensing Nutrition 2020 , 31-48		
269	Nutritional Epigenetics 2020 , 65-79		
268	Regulatory Impact of Non-coding RNA 2020 , 129-142		
267	Genes and Chromatin 2020 , 1-17		
266	Transcription Factors and Signal Transduction 2020 , 35-57		
265	Chromatin Remodeling and Organization 2020 , 115-128		
264	Monitoring genome-wide chromatin accessibility by formaldehyde-assisted isolation of regulatory elements sequencing (FAIRE-seq) 2020 , 353-369		
263	Vitamin D receptor(s): In the nucleus but also at membranes?. <i>Experimental Dermatology</i> , 2020 , 29, 876-884		23
262	Common and personal target genes of the micronutrient vitamin D in primary immune cells from human peripheral blood. <i>Scientific Reports</i> , 2020 , 10, 21051	4.9	8
261	Randomized controlled trial on the effectiveness of web-based Genomics Nursing Education Intervention for undergraduate nursing students: a study protocol. <i>Journal of Advanced Nursing</i> , 2020 , 76, 3136-3146	3.1	2
260	Vitamin D and evolution: Pharmacologic implications. <i>Biochemical Pharmacology</i> , 2020 , 173, 113595	6	37
259	Human Epigenetics: How Science Works 2019 ,		2
258	Epigenome-Wide Effects of Vitamin D. <i>Proceedings (mdpi)</i> , 2019 , 11, 17	0.3	
257	Vitamin D Signaling Suppresses Early Prostate Carcinogenesis in TgAPT Mice. <i>Cancer Prevention Research</i> , 2019 , 12, 343-356	3.2	11

256	Nutrigenomics of Vitamin D. <i>Nutrients</i> , 2019 , 11,	6.7	70
255	Primary Vitamin D Target Genes of Human Monocytes. <i>Frontiers in Physiology</i> , 2019 , 10, 194	4.6	42
254	Vitamin D and Its Synthetic Analogs. <i>Journal of Medicinal Chemistry</i> , 2019 , 62, 6854-6875	8.3	32
253	Healthy Nordic Diet Modulates the Expression of Genes Related to Mitochondrial Function and Immune Response in Peripheral Blood Mononuclear Cells from Subjects with Metabolic Syndrome-A SYSDIET Sub-Study. <i>Molecular Nutrition and Food Research</i> , 2019 , 63, e1801405	5.9	8
252	Machine learning approaches infer vitamin D signaling: Critical impact of vitamin D receptor binding within topologically associated domains. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2019 , 185, 103-109	5.1	13
251	Vitamin D Signaling in the Context of Innate Immunity: Focus on Human Monocytes. <i>Frontiers in Immunology</i> , 2019 , 10, 2211	8.4	35
250	Vitamin D: A Micronutrient Regulating Genes. <i>Current Pharmaceutical Design</i> , 2019 , 25, 1740-1746	3.3	16
249	Epigenome-Environment Interactions and Their Therapy 2019 , 135-144		
248	Chromatin Modifying Proteins and RNAs 2019 , 51-62		
247	Population Epigenetics and Aging 2019 , 75-87		
246	Epigenetics of Immune Function 2019 , 123-134		
245	Histone Modifications 2019 , 41-49		
244	DNA Methylation 2019 , 29-39		
243	Chromatin 2019 , 15-28		1
242	An Isocaloric Nordic Diet Modulates and Gene Expression in Peripheral Blood Mononuclear Cells in Individuals with Metabolic Syndrome-A SYSDIET Sub-Study. <i>Nutrients</i> , 2019 , 11,	6.7	9
241	Modulation of vitamin D signaling by the pioneer factor CEBPA. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2019 , 1862, 96-106	6	18
240	In vivo transcriptome changes of human white blood cells in response to vitamin D. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2019 , 188, 71-76	5.1	28
239	What Is Epigenomics? 2018 , 3-18		0

238 Epigenomics of Immune Function **2018**, 191-204

237 Nutritional Epigenomics **2018**, 205-217

236 Methods and Applications of Epigenomics **2018**, 19-38

235 The Structure of Chromatin **2018**, 41-56

234 DNA Methylation **2018**, 57-73

1

233 The Histone Code **2018**, 75-88

2

232 Chromatin Modifiers **2018**, 89-102

231 Chromatin Remodelers and Organizers **2018**, 103-120

230 Embryogenesis and Cellular Differentiation **2018**, 123-140

229 Population Epigenomics and Aging **2018**, 141-158

228 In vivo response of the human epigenome to vitamin D: A Proof-of-principle study. *Journal of Steroid Biochemistry and Molecular Biology*, **2018**, 180, 142-148

5.1 37

227 The concept of the personal vitamin D response index. *Journal of Steroid Biochemistry and Molecular Biology*, **2018**, 175, 12-17

5.1 80

226 ETS transcription factor family member GABPA contributes to vitamin D receptor target gene regulation. *Journal of Steroid Biochemistry and Molecular Biology*, **2018**, 177, 46-52

5.1 17

225 Vitamin D Genomics: From to. *Frontiers in Endocrinology*, **2018**, 9, 250

5.7 27

224 Vitamin D and Chromatin **2018**, 217-225

223 Human Epigenomics **2018**,

12

222 The impact of the vitamin D-modulated epigenome on VDR target gene regulation. *Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms*, **2018**, 1861, 697-705

6 35

221 Molecular evaluation of vitamin D responsiveness of healthy young adults. *Journal of Steroid Biochemistry and Molecular Biology*, **2017**, 174, 314-321

5.1 24

220	Epigenomic PU.1-VDR crosstalk modulates vitamin D signaling. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2017 , 1860, 405-415	6	30
219	Molecular endocrinology of vitamin D on the epigenome level. <i>Molecular and Cellular Endocrinology</i> , 2017 , 453, 14-21	4-4	42
218	Selective regulation of biological processes by vitamin D based on the spatio-temporal cistrome of its receptor. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2017 , 1860, 952-961	6	32
217	Integration of VDR genome wide binding and GWAS genetic variation data reveals co-occurrence of VDR and NF-B binding that is linked to immune phenotypes. <i>BMC Genomics</i> , 2017 , 18, 132	4-5	27
216	Vitamin D-dependent chromatin association of CTCF in human monocytes. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2016 , 1859, 1380-1388	6	26
215	Mechanisms of Gene Regulation 2016 ,		14
214	Chronic Inflammation and Metabolic Stress 2016 , 121-137		
213	Nutrigenomics 2016 ,		2
212	Adaption of the Human Genome to Dietary Changes 2016 , 71-86		
211	Nutritional Epigenomics 2016 , 87-104		
210	Glucose Homeostasis, Insulin Resistance and βCell Failure 2016 , 163-180		
209	Mapping the Genome 2016 , 109-125		
208	Nutritional Signaling and Aging 2016 , 105-120		
207	Overview: What Is Gene Expression? 2016 , 3-16		
206	Effects of a healthy Nordic diet on gene expression changes in peripheral blood mononuclear cells in response to an oral glucose tolerance test in subjects with metabolic syndrome: a SYSDIET sub-study. <i>Genes and Nutrition</i> , 2016 , 11, 3	4-3	16
205	Epigenome-wide effects of vitamin D and their impact on the transcriptome of human monocytes involve CTCF. <i>Nucleic Acids Research</i> , 2016 , 44, 4090-104	20.1	65
204	The vitamin D-dependent transcriptome of human monocytes. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2016 , 164, 180-187	5.1	26
203	Vitamin D receptor signaling improves Hutchinson-Gilford progeria syndrome cellular phenotypes. <i>Oncotarget</i> , 2016 , 7, 30018-31	3-3	37

202	Hypertension, Atherosclerosis and Dyslipidemias 2016 , 195-208		1
201	The Metabolic Syndrome 2016 , 209-222		
200	Switching Genes On and Off: The Example of Nuclear Receptors 2016 , 95-108		
199	Human Genomic Variation 2016 , 25-44		
198	The Impact of Chromatin 2016 , 17-34		
197	Linking Signal Transduction and Gene Regulation 2016 , 75-93		
196	Molecular Approaches for Optimizing Vitamin D Supplementation. <i>Vitamins and Hormones</i> , 2016 , 100, 255-71	2.5	23
195	Nutrition and Common Diseases 2016 , 3-23		1
194	Sensing Nutrition 2016 , 47-69		
193	Vitamin D receptor 2016: novel ligands and structural insights. <i>Expert Opinion on Therapeutic Patents</i> , 2016 , 26, 1291-1306	6.8	38
192	Multiplex Eukaryotic Transcription (In)activation: Timing, Bursting and Cycling of a Ratchet Clock Mechanism. <i>PLoS Computational Biology</i> , 2015 , 11, e1004236	5	15
191	Dissecting high from low responders in a vitamin D3 intervention study. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2015 , 148, 275-82	5.1	28
190	Tracing the molecular basis of transcriptional dynamics in noisy data by using an experiment-based mathematical model. <i>Nucleic Acids Research</i> , 2015 , 43, 153-61	20.1	19
189	Vitamin D receptor signaling and its therapeutic implications: Genome-wide and structural view. <i>Canadian Journal of Physiology and Pharmacology</i> , 2015 , 93, 311-8	2.4	30
188	Healthy Nordic diet downregulates the expression of genes involved in inflammation in subcutaneous adipose tissue in individuals with features of the metabolic syndrome. <i>American Journal of Clinical Nutrition</i> , 2015 , 101, 228-39	7	38
187	The transcriptional regulator BCL6 participates in the secondary gene regulatory response to vitamin D. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2015 , 1849, 300-8	6	20
186	Relevance of vitamin D receptor target genes for monitoring the vitamin D responsiveness of primary human cells. <i>PLoS ONE</i> , 2015 , 10, e0124339	3.7	44
185	What do we learn from the genome-wide perspective on vitamin D3?. <i>Anticancer Research</i> , 2015 , 35, 1143-51	2.3	11

184	Effects of a healthy Nordic diet on plasma 25-hydroxyvitamin D concentration in subjects with metabolic syndrome: a randomized, [corrected] controlled trial (SYSDIET). <i>European Journal of Nutrition</i> , 2014 , 53, 1123-34	5.2	12
183	Mechanisms of Gene Regulation 2014 ,		10
182	The ASAP2 gene is a primary target of 1,25-dihydroxyvitamin D3 in human monocytes and macrophages. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2014 , 144 Pt A, 12-8	5.1	17
181	Primary vitamin D receptor target genes as biomarkers for the vitamin D3 status in the hematopoietic system. <i>Journal of Nutritional Biochemistry</i> , 2014 , 25, 875-84	6.3	24
180	Patterns of genome-wide VDR locations. <i>PLoS ONE</i> , 2014 , 9, e96105	3.7	93
179	The physiology of vitamin D-far more than calcium and bone. <i>Frontiers in Physiology</i> , 2014 , 5, 335	4.6	40
178	Genome-wide (over)view on the actions of vitamin D. <i>Frontiers in Physiology</i> , 2014 , 5, 167	4.6	86
177	Changes in vitamin D target gene expression in adipose tissue monitor the vitamin D response of human individuals. <i>Molecular Nutrition and Food Research</i> , 2014 , 58, 2036-45	5.9	29
176	From pharmacogenomics to integrated personal omics profiling: a gap in implementation into healthcare. <i>Personalized Medicine</i> , 2014 , 11, 625-629	2.2	3
175	Characterization of genomic vitamin D receptor binding sites through chromatin looping and opening. <i>PLoS ONE</i> , 2014 , 9, e96184	3.7	24
174	Switching Genes on and off: The Example of Nuclear Receptors 2014 , 91-104		
173	Chromatin Remodeling 2014 , 169-182		
172	Dynamics of 1,25-dihydroxyvitamin D3-dependent chromatin accessibility of early vitamin D receptor target genes. <i>Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms</i> , 2013 , 1829, 1266-75 ⁶		40
171	Vitamin D receptor signaling mechanisms: integrated actions of a well-defined transcription factor. <i>Steroids</i> , 2013 , 78, 127-36	2.8	178
170	The gene for the transcription factor BHLHE40/DEC1/stra13 is a dynamically regulated primary target of the vitamin D receptor. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2013 , 136, 62-7	5.1	15
169	Gene regulatory scenarios of primary 1,25-dihydroxyvitamin d3 target genes in a human myeloid leukemia cell line. <i>Cancers</i> , 2013 , 5, 1221-41	6.6	15
168	Chromatin acetylation at transcription start sites and vitamin D receptor binding regions relates to effects of 1,25-dihydroxyvitamin D3 and histone deacetylase inhibitors on gene expression. <i>Nucleic Acids Research</i> , 2013 , 41, 110-24	20.1	66
167	Primary 1,25-dihydroxyvitamin D3 response of the interleukin 8 gene cluster in human monocyte- and macrophage-like cells. <i>PLoS ONE</i> , 2013 , 8, e78170	3.7	36

166	Primary vitamin D target genes allow a categorization of possible benefits of vitamin D supplementation. <i>PLoS ONE</i> , 2013 , 8, e71042	3.7	67
165	Inhibition of cytokine secretion from adipocytes by 1,25-dihydroxyvitamin D β via the NF- κ B pathway. <i>FASEB Journal</i> , 2012 , 26, 4400-7	0.9	60
164	Vitamin D receptor ligands: the impact of crystal structures. <i>Expert Opinion on Therapeutic Patents</i> , 2012 , 22, 417-35	6.8	42
163	Genome-wide landscape of liver X receptor chromatin binding and gene regulation in human macrophages. <i>BMC Genomics</i> , 2012 , 13, 50	4.5	55
162	Differential effects of 1,25-dihydroxycholecalciferol on MCP-1 and adiponectin production in human white adipocytes. <i>European Journal of Nutrition</i> , 2012 , 51, 335-42	5.2	58
161	Dataset integration identifies transcriptional regulation of microRNA genes by PPAR α in differentiating mouse 3T3-L1 adipocytes. <i>Nucleic Acids Research</i> , 2012 , 40, 4446-60	20.1	60
160	Current status of vitamin D signaling and its therapeutic applications. <i>Current Topics in Medicinal Chemistry</i> , 2012 , 12, 528-47	3	79
159	The need for education in personalized medicine. <i>Personalized Medicine</i> , 2012 , 9, 147-150	2.2	14
158	The first genome-wide view of vitamin D receptor locations and their mechanistic implications. <i>Anticancer Research</i> , 2012 , 32, 271-82	2.3	56
157	Mechanism of 1,25-dihydroxyvitamin D(3)-dependent repression of interleukin-12B. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2011 , 1813, 810-8	4.9	39
156	1,25-dihydroxyvitamin D3 influences cellular homocysteine levels in murine preosteoblastic MC3T3-E1 cells by direct regulation of cystathionine β -synthase. <i>Journal of Bone and Mineral Research</i> , 2011 , 26, 2991-3000	6.3	64
155	Epigenetic control of a VDR-governed feed-forward loop that regulates p21(waf1/cip1) expression and function in non-malignant prostate cells. <i>Nucleic Acids Research</i> , 2011 , 39, 2045-56	20.1	55
154	Cyclical regulation of the insulin-like growth factor binding protein 3 gene in response to 1 α ,25-dihydroxyvitamin D3. <i>Nucleic Acids Research</i> , 2011 , 39, 502-12	20.1	24
153	Dynamic nature of transcriptional regulation of nuclear receptor target genes in the context of chromatin organization. <i>Dermato-Endocrinology</i> , 2011 , 3, 125-129		1
152	Electrophilic nitro-fatty acids activate NRF2 by a KEAP1 cysteine 151-independent mechanism. <i>Journal of Biological Chemistry</i> , 2011 , 286, 14019-27	5.4	157
151	Cellular content of UDP-N-acetylhexosamines controls hyaluronan synthase 2 expression and correlates with O-linked N-acetylglucosamine modification of transcription factors YY1 and SP1. <i>Journal of Biological Chemistry</i> , 2011 , 286, 33632-40	5.4	53
150	Nuclear hormone 1,25-dihydroxyvitamin D3 elicits a genome-wide shift in the locations of VDR chromatin occupancy. <i>Nucleic Acids Research</i> , 2011 , 39, 9181-93	20.1	172
149	Target Genes of Vitamin D 2011 , 211-226		2

148	Dynamic nature of transcriptional regulation of nuclear receptor target genes in the context of chromatin organization. <i>Dermato-Endocrinology</i> , 2011 , 3, 125-9		1
147	Time-resolved expression profiling of the nuclear receptor superfamily in human adipogenesis. <i>PLoS ONE</i> , 2010 , 5, e12991	3.7	24
146	Design principles of nuclear receptor signaling: how complex networking improves signal transduction. <i>Molecular Systems Biology</i> , 2010 , 6, 446	12.2	26
145	Profiling of promoter occupancy by PPARalpha in human hepatoma cells via CHIP-chip analysis. <i>Nucleic Acids Research</i> , 2010 , 38, 2839-50	20.1	90
144	The Impact of Whole Genome In Silico Screening for Nuclear Receptor-Binding Sites in Systems Biology 2010 , 309-324		
143	The number of vitamin D receptor binding sites defines the different vitamin D responsiveness of the CYP24 gene in malignant and normal mammary cells. <i>Journal of Biological Chemistry</i> , 2010 , 285, 24174-83	5.4	31
142	The impact of transcriptional cycling on gene regulation. <i>Transcription</i> , 2010 , 1, 13-6	4.8	7
141	New Insights to Nuclear Receptor Gene Regulation from Analysis of their Response Elements in Target Genes 2010 , 419-437		
140	25-Hydroxyvitamin D(3) is an agonistic vitamin D receptor ligand. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2010 , 118, 162-70	5.1	101
139	The down-regulation of the human MYC gene by the nuclear hormone 1alpha,25-dihydroxyvitamin D3 is associated with cycling of corepressors and histone deacetylases. <i>Journal of Molecular Biology</i> , 2010 , 400, 284-94	6.5	52
138	Dynamics of nuclear receptor target gene regulation. <i>Chromosoma</i> , 2010 , 119, 479-84	2.8	49
137	Primary effect of 1,25(OH) ₂ D ₃ on IL-10 expression in monocytes is short-term down-regulation. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 2010 , 1803, 1276-86	4.9	65
136	Molecular mechanism of allosteric communication in the human PPARalpha-RXRalpha heterodimer. <i>Proteins: Structure, Function and Bioinformatics</i> , 2010 , 78, 873-87	4.2	17
135	Diversity of Vitamin D Target Genes 2010 , 255-274		
134	Cyclical chromatin looping and transcription factor association on the regulatory regions of the p21 (CDKN1A) gene in response to 1alpha,25-dihydroxyvitamin D3. <i>Journal of Biological Chemistry</i> , 2009 , 284, 8073-82	5.4	85
133	Regulation of the hyaluronan synthase 2 gene by convergence in cyclic AMP response element-binding protein and retinoid acid receptor signaling. <i>Journal of Biological Chemistry</i> , 2009 , 284, 18270-81	5.4	39
132	Population-level transcription cycles derive from stochastic timing of single-cell transcription. <i>Cell</i> , 2009 , 138, 489-501	56.2	38
131	Cell cycle regulatory effects of retinoic Acid and forskolin are mediated by the cyclin C gene. <i>Journal of Molecular Biology</i> , 2009 , 393, 261-71	6.5	10

130	A genomic perspective on vitamin D signaling. <i>Anticancer Research</i> , 2009 , 29, 3485-93	2.3	76
129	DICKKOPF-4 is induced by TCF/beta-catenin and upregulated in human colon cancer, promotes tumour cell invasion and angiogenesis and is repressed by 1alpha,25-dihydroxyvitamin D3. <i>Oncogene</i> , 2008 , 27, 4467-77	9.2	134
128	Coordinate induction of PPAR alpha and SREBP2 in multifunctional protein 2 deficient mice. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2008 , 1781, 694-702	5	31
127	Distinct HDACs regulate the transcriptional response of human cyclin-dependent kinase inhibitor genes to Trichostatin A and 1alpha,25-dihydroxyvitamin D3. <i>Nucleic Acids Research</i> , 2008 , 36, 121-32	20.1	56
126	Variations in the ghrelin receptor gene associate with obesity and glucose metabolism in individuals with impaired glucose tolerance. <i>PLoS ONE</i> , 2008 , 3, e2941	3.7	26
125	A Role for the PPARgamma in Cancer Therapy. <i>PPAR Research</i> , 2008 , 2008, 314974	4.3	29
124	Screening for PPAR Responsive Regulatory Modules in Cancer. <i>PPAR Research</i> , 2008 , 2008, 749073	4.3	3
123	The vitamin D receptor. <i>Dermatologic Clinics</i> , 2007 , 25, 515-23, viii	4.2	33
122	Integration of the activation of the human hyaluronan synthase 2 gene promoter by common cofactors of the transcription factors retinoic acid receptor and nuclear factor kappaB. <i>Journal of Biological Chemistry</i> , 2007 , 282, 11530-9	5.4	36
121	Vitamins as hormones. <i>Hormone and Metabolic Research</i> , 2007 , 39, 71-84	3.1	121
120	Selective use of multiple vitamin D response elements underlies the 1 alpha,25-dihydroxyvitamin D3-mediated negative regulation of the human CYP27B1 gene. <i>Nucleic Acids Research</i> , 2007 , 35, 2734-47	20.1	85
119	Comprehensive analysis of PPARalpha-dependent regulation of hepatic lipid metabolism by expression profiling. <i>PPAR Research</i> , 2007 , 2007, 26839	4.3	159
118	Functional characterization of vitamin D responding regions in the human 5-Lipoxygenase gene. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2007 , 1771, 864-72	5	50
117	Controlling the chromatin organization of vitamin D target genes by multiple vitamin D receptor binding sites. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2007 , 103, 338-43	5.1	30
116	Three members of the human pyruvate dehydrogenase kinase gene family are direct targets of the peroxisome proliferator-activated receptor beta/delta. <i>Journal of Molecular Biology</i> , 2007 , 372, 341-55	6.5	74
115	Subcellular localisation of BAG-1 and its regulation of vitamin D receptor-mediated transactivation and involucrin expression in oral keratinocytes: implications for oral carcinogenesis. <i>Experimental Cell Research</i> , 2007 , 313, 3222-38	4.2	12
114	Meta-analysis of primary target genes of peroxisome proliferator-activated receptors. <i>Genome Biology</i> , 2007 , 8, R147	18.3	59
113	Detailed molecular understanding of agonistic and antagonistic vitamin D receptor ligands. <i>Current Topics in Medicinal Chemistry</i> , 2006 , 6, 1243-53	3	32

112	Vitamin D receptor agonists specifically modulate the volume of the ligand-binding pocket. <i>Journal of Biological Chemistry</i> , 2006 , 281, 10516-26	5.4	40
111	The insulin-like growth factor-binding protein 1 gene is a primary target of peroxisome proliferator-activated receptors. <i>Journal of Biological Chemistry</i> , 2006 , 281, 39607-19	5.4	52
110	Regulation of the human p21(waf1/cip1) gene promoter via multiple binding sites for p53 and the vitamin D3 receptor. <i>Nucleic Acids Research</i> , 2006 , 34, 543-54	20.1	198
109	Analysis of the 5-lipoxygenase promoter and characterization of a vitamin D receptor binding site. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2006 , 1761, 686-97	5	24
108	An integrated biological approach to nuclear receptor signaling in physiological control and disease. <i>Critical Reviews in Eukaryotic Gene Expression</i> , 2006 , 16, 1-22	1.3	41
107	Epigenetic corruption of VDR signalling in malignancy. <i>Anticancer Research</i> , 2006 , 26, 2557-66	2.3	42
106	The impact of chromatin organization of vitamin D target genes. <i>Anticancer Research</i> , 2006 , 26, 2637-45	2.3	23
105	Regulation of multiple insulin-like growth factor binding protein genes by 1alpha,25-dihydroxyvitamin D3. <i>Nucleic Acids Research</i> , 2005 , 33, 5521-32	20.1	79
104	Antagonist- and inverse agonist-driven interactions of the vitamin D receptor and the constitutive androstane receptor with corepressor protein. <i>Molecular Endocrinology</i> , 2005 , 19, 2258-72		37
103	Identification of pregnane X receptor binding sites in the regulatory regions of genes involved in bile acid homeostasis. <i>Journal of Molecular Biology</i> , 2005 , 346, 505-19	6.5	61
102	The human peroxisome proliferator-activated receptor delta gene is a primary target of 1alpha,25-dihydroxyvitamin D3 and its nuclear receptor. <i>Journal of Molecular Biology</i> , 2005 , 349, 248-60	6.5	152
101	Spatio-temporal activation of chromatin on the human CYP24 gene promoter in the presence of 1alpha,25-Dihydroxyvitamin D3. <i>Journal of Molecular Biology</i> , 2005 , 350, 65-77	6.5	118
100	Gene regulatory potential of nonsteroidal vitamin D receptor ligands. <i>Molecular Endocrinology</i> , 2005 , 19, 2060-73		41
99	Regulation of the human cyclin C gene via multiple vitamin D3-responsive regions in its promoter. <i>Nucleic Acids Research</i> , 2005 , 33, 2440-51	20.1	57
98	The human hyaluronan synthase 2 gene is a primary retinoic acid and epidermal growth factor responding gene. <i>Journal of Biological Chemistry</i> , 2005 , 280, 14636-44	5.4	82
97	A role of melatonin in neuroectodermal-mesodermal interactions: the hair follicle synthesizes melatonin and expresses functional melatonin receptors. <i>FASEB Journal</i> , 2005 , 19, 1710-2	0.9	99
96	Structural determinants of the agonist-independent association of human peroxisome proliferator-activated receptors with coactivators. <i>Journal of Biological Chemistry</i> , 2005 , 280, 26543-56	5.4	51
95	Molecular Basis of the Diversity of Vitamin D Target Genes 2005 , 313-325		5

94	The highly conserved region of the co-repressor Sin3A functionally interacts with the co-repressor Alien. <i>Nucleic Acids Research</i> , 2004 , 32, 2995-3004	20.1	27
93	Agonist-dependent and agonist-independent transactivations of the human constitutive androstane receptor are modulated by specific amino acid pairs. <i>Journal of Biological Chemistry</i> , 2004 , 279, 33558-66	5.4	19
92	A structural basis for the species-specific antagonism of 26,23-lactones on vitamin D signaling. <i>Chemistry and Biology</i> , 2004 , 11, 1147-56		29
91	Using chromatin immunoprecipitation to monitor 1alpha,25-dihydroxyvitamin D3-dependent chromatin activity on the human CYP24 promoter. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2004 , 89-90, 277-9	5.1	15
90	The genes of the coactivator TIF2 and the corepressor SMRT are primary 1alpha,25(OH)2D3 targets. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2004 , 89-90, 257-60	5.1	27
89	Ligand-mediated conformational changes of the VDR are required for gene transactivation. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2004 , 89-90, 227-32	5.1	24
88	New vitamin D receptor ligands. <i>Expert Opinion on Therapeutic Patents</i> , 2003 , 13, 761-772	6.8	35
87	Structural evaluation of the agonistic action of a vitamin D analog with two side chains binding to the nuclear vitamin D receptor. <i>Molecular Pharmacology</i> , 2003 , 63, 1230-7	4.3	28
86	Corepressor excess shifts the two-side chain vitamin D analog Gemini from an agonist to an inverse agonist of the vitamin D receptor. <i>Molecular Endocrinology</i> , 2003 , 17, 2028-38		31
85	The critical role of carboxy-terminal amino acids in ligand-dependent and -independent transactivation of the constitutive androstane receptor. <i>Molecular Endocrinology</i> , 2003 , 17, 234-46		31
84	Molecular basis of the selective activity of vitamin D analogues. <i>Journal of Cellular Biochemistry</i> , 2003 , 88, 274-81	4.7	91
83	Characterization of DNA complexes formed by the nuclear receptor constitutive androstane receptor. <i>Journal of Biological Chemistry</i> , 2003 , 278, 43299-310	5.4	50
82	Current understanding of the function of the nuclear vitamin D receptor in response to its natural and synthetic ligands. <i>Recent Results in Cancer Research</i> , 2003 , 164, 29-42	1.5	94
81	Orphan nuclear receptor binding site in the human inducible nitric oxide synthase promoter mediates responsiveness to steroid and xenobiotic ligands. <i>Journal of Cellular Biochemistry</i> , 2002 , 85, 72-82	4.7	46
80	Differential nuclear receptor signalling from DR4-type response elements. <i>Journal of Cellular Biochemistry</i> , 2002 , 86, 601-12	4.7	30
79	Cross-repression, a functional consequence of the physical interaction of non-liganded nuclear receptors and POU domain transcription factors. <i>Journal of Biological Chemistry</i> , 2002 , 277, 18501-9	5.4	23
78	Modulation of mouse and human phenobarbital-responsive enhancer module by nuclear receptors. <i>Molecular Pharmacology</i> , 2002 , 62, 366-78	4.3	76
77	Critical role of helix 12 of the vitamin D(3) receptor for the partial agonism of carboxylic ester antagonists. <i>Journal of Molecular Biology</i> , 2002 , 315, 229-38	6.5	53

76	Orphan nuclear receptor binding site in the human inducible nitric oxide synthase promoter mediates responsiveness to steroid and xenobiotic ligands. <i>Journal of Cellular Biochemistry</i> , 2002 , 85, 72-82	4.7	21
75	Single thyroid hormone receptor monomers are competent for co-activator-mediated transactivation. <i>Biochemical Journal</i> , 2001 , 360, 387-93	3.8	5
74	Single thyroid hormone receptor monomers are competent for co-activator-mediated transactivation. <i>Biochemical Journal</i> , 2001 , 360, 387-393	3.8	5
73	Molecular evaluation of vitamin D3 receptor agonists designed for topical treatment of skin diseases. <i>Journal of Investigative Dermatology</i> , 2001 , 116, 785-92	4.3	29
72	Gene regulatory potential of 1alpha,25-dihydroxyvitamin D(3) analogues with two side chains. <i>Journal of Cellular Biochemistry</i> , 2001 , Suppl 36, 179-90	4.7	24
71	Interaction of two novel 14-epivitamin D3 analogs with vitamin D3 receptor-retinoid X receptor heterodimers on vitamin D3 responsive elements. <i>Journal of Bone and Mineral Research</i> , 2001 , 16, 625-38	6.3	26
70	Peroxisome proliferator-activated receptor delta is a specific sensor for teratogenic valproic acid derivatives. <i>European Journal of Pharmacology</i> , 2001 , 431, 25-33	5.3	42
69	Central role of VDR conformations for understanding selective actions of vitamin D(3) analogues. <i>Steroids</i> , 2001 , 66, 213-21	2.8	53
68	Different molecular mechanisms of vitamin D(3) receptor antagonists. <i>Molecular Pharmacology</i> , 2001 , 59, 1478-85	4.3	68
67	Gene regulation by melatonin. <i>Annals of the New York Academy of Sciences</i> , 2000 , 917, 387-96	6.5	91
66	All natural DR3-type vitamin D response elements show a similar functionality in vitro. <i>Biochemical Journal</i> , 2000 , 352, 301	3.8	27
65	Cyclin C is a primary 1alpha,25-dihydroxyvitamin D(3) responding gene. <i>Journal of Cellular Biochemistry</i> , 2000 , 77, 75-81	4.7	16
64	Carboxylic ester antagonists of 1alpha,25-dihydroxyvitamin D(3) show cell-specific actions. <i>Chemistry and Biology</i> , 2000 , 7, 885-94		53
63	VDR-Alien: a novel, DNA-selective vitamin D3 receptor-corepressor partnership. <i>FASEB Journal</i> , 2000 , 14, 1455-1463	0.9	122
62	Structure activity relationship of carboxylic ester antagonists of the vitamin D(3) receptor. <i>Molecular Pharmacology</i> , 2000 , 58, 1067-74	4.3	55
61	Inactivation of zinc finger transcription factors provides a mechanism for a gene regulatory role of nitric oxide. <i>FASEB Journal</i> , 2000 , 14, 166-73	0.9	97
60	VDR-Alien: a novel, DNA-selective vitamin D(3) receptor-corepressor partnership. <i>FASEB Journal</i> , 2000 , 14, 1455-63	0.9	119
59	Antagonistic action of a 25-carboxylic ester analogue of 1alpha, 25-dihydroxyvitamin D3 is mediated by a lack of ligand-induced vitamin D receptor interaction with coactivators. <i>Journal of Biological Chemistry</i> , 2000 , 275, 16506-12	5.4	59

58	An aryl hydrocarbon receptor conformation acts as the functional core of nuclear dioxin signaling. <i>Nucleic Acids Research</i> , 2000 , 28, 2286-91	20.1	34
57	Ligand-triggered stabilization of vitamin D receptor/retinoid X receptor heterodimer conformations on DR4-type response elements. <i>Journal of Molecular Biology</i> , 2000 , 296, 743-56	6.5	54
56	Agonist-triggered modulation of the activated and silent state of the vitamin D(3) receptor by interaction with co-repressors and co-activators. <i>Journal of Molecular Biology</i> , 2000 , 304, 793-801	6.5	36
55	All natural DR3-type vitamin D response elements show a similar functionality in vitro. <i>Biochemical Journal</i> , 2000 , 352, 301-309	3.8	48
54	Zinc Finger Transcription Factors as Molecular Targets for Nitric Oxide-mediated Immunosuppression: Inhibition of IL-2 Gene Expression in Murine Lymphocytes. <i>Molecular Medicine</i> , 1999 , 5, 721-730	6.2	68
53	Selective recognition of vitamin D receptor conformations mediates promoter selectivity of vitamin D analogs. <i>Molecular Pharmacology</i> , 1999 , 55, 1077-87	4.3	47
52	Potential by vitamin D analogs of TNFalpha and ceramide-induced apoptosis in MCF-7 cells is associated with activation of cytosolic phospholipase A2. <i>Cell Death and Differentiation</i> , 1999 , 6, 890-901	12.7	36
51	Lipid soluble vitamins in gene regulation. <i>BioFactors</i> , 1999 , 10, 91-7	6.1	39
50	Inhibitory effect of uremic solutions on protein-DNA-complex formation of the vitamin D receptor and other members of the nuclear receptor superfamily. <i>Journal of Cellular Biochemistry</i> , 1999 , 74, 386-394	4.7	10
49	Positive and negative interaction of 1,25-dihydroxyvitamin D3 and the retinoid CD437 in the induction of human melanoma cell apoptosis. <i>International Journal of Cancer</i> , 1999 , 81, 467-70	7.5	39
48	Melatonin receptor ligands. <i>Expert Opinion on Therapeutic Patents</i> , 1999 , 9, 281-290	6.8	10
47	Inhibitory effect of uremic solutions on protein-DNA-complex formation of the vitamin D receptor and other members of the nuclear receptor superfamily. <i>Journal of Cellular Biochemistry</i> , 1999 , 74, 386-394	4.7	2
46	Metabolism of the vitamin D3 analogue EB1089 alters receptor complex formation and reduces promoter selectivity. <i>British Journal of Pharmacology</i> , 1998 , 125, 607-14	8.6	7
45	Differential apoptotic response of human melanoma cells to 1 alpha,25-dihydroxyvitamin D3 and its analogues. <i>Cell Death and Differentiation</i> , 1998 , 5, 946-52	12.7	72
44	Structural variants of the vitamin D analogue EB1089 reduce its ligand sensitivity and promoter selectivity 1998 , 71, 340-350		6
43	Identification of two activating elements in the proximal promoter region of the human glutathione transferase-A1 and -A2 genes. <i>Archives of Biochemistry and Biophysics</i> , 1998 , 359, 122-7	4.1	5
42	The role of the T-box for the function of the vitamin D receptor on different types of response elements. <i>Nucleic Acids Research</i> , 1998 , 26, 5372-8	20.1	32
41	Gene regulation by vitamin D3. <i>Critical Reviews in Eukaryotic Gene Expression</i> , 1998 , 8, 19-42	1.3	140

40	Allosteric interaction of the 1alpha,25-dihydroxyvitamin D3 receptor and the retinoid X receptor on DNA. <i>Nucleic Acids Research</i> , 1997 , 25, 4307-13	20.1	15
39	Pineal gland hormone melatonin binds and activates an orphan of the nuclear receptor superfamily.. <i>Journal of Biological Chemistry</i> , 1997 , 272, 16707	5.4	32
38	Functional conformations of the nuclear 1alpha,25-dihydroxyvitamin D3 receptor. <i>Biochemical Journal</i> , 1997 , 327 (Pt 2), 561-8	3.8	28
37	Functional characterization of a novel type of 1 alpha,25-dihydroxyvitamin D3 response element identified in the mouse c-fos promoter. <i>Biochemical and Biophysical Research Communications</i> , 1997 , 230, 646-51	3.4	39
36	Nuclear Signalling of Melatonin 1997 , 23, 25-35		10
35	Sensitive induction of apoptosis in breast cancer cells by a novel 1,25-dihydroxyvitamin D3 analogue shows relation to promoter selectivity. <i>Journal of Cellular Biochemistry</i> , 1997 , 66, 552-62	4.7	70
34	1 alpha,25-dihydroxyvitamin D3 receptor as a mediator of transrepression of retinoid signaling. <i>Journal of Cellular Biochemistry</i> , 1997 , 67, 287-96	4.7	15
33	Functional characterization of a 1,25-dihydroxyvitamin D3 receptor binding site found in the rat atrial natriuretic factor promoter. <i>Biochemical and Biophysical Research Communications</i> , 1996 , 218, 882-6	3.4	54
32	The antiproliferative effect of vitamin D3 analogues. <i>Dermatology</i> , 1996 , 192, 195-7	4.4	6
31	The vitamin D(3) receptor in the context of the nuclear receptor superfamily : The central role of the retinoid X receptor. <i>Endocrine</i> , 1996 , 4, 91-105		57
30	The potent anti-proliferative effect of 20-epi analogues of 1,25 dihydroxyvitamin D3 in human breast-cancer MCF-7 cells is related to promoter selectivity. <i>International Journal of Cancer</i> , 1996 , 67, 739-42	7.5	12
29	Identification of a vitamin D3 response element in the fibronectin gene that is bound by a vitamin D3 receptor homodimer. <i>Journal of Cellular Biochemistry</i> , 1996 , 60, 322-333	4.7	42
28	High-affinity nuclear receptor binding of 20-epi analogues of 1,25-dihydroxyvitamin D3 correlates well with gene activation 1996 , 62, 325-333		14
27	Potent gene regulatory and antiproliferative activities of 20-methyl analogues of 1,25 dihydroxyvitamin D3. <i>Journal of Cellular Biochemistry</i> , 1996 , 63, 199-206	4.7	16
26	Identification of natural monomeric response elements of the nuclear receptor RZR/ROR. They also bind COUP-TF homodimers. <i>Journal of Biological Chemistry</i> , 1996 , 271, 19732-6	5.4	86
25	The high affinity ligand binding conformation of the nuclear 1,25-dihydroxyvitamin D3 receptor is functionally linked to the transactivation domain 2 (AF-2). <i>Nucleic Acids Research</i> , 1996 , 24, 4513-8	20.1	35
24	Thiazolidine diones, specific ligands of the nuclear receptor retinoid Z receptor/retinoid acid receptor-related orphan receptor alpha with potent antiarthritic activity. <i>Journal of Biological Chemistry</i> , 1996 , 271, 13515-22	5.4	74
23	The orphan receptor family RZR/ROR, melatonin and 5-lipoxygenase: an unexpected relationship. <i>Journal of Pineal Research</i> , 1995 , 18, 171-8	10.4	146

22	The Induction and Functions of Murine T-Helper Cell Subsets. <i>Journal of Investigative Dermatology</i> , 1995 , 105, S8-S13	4.3	2
21	The nuclear receptor for melatonin represses 5-lipoxygenase gene expression in human B lymphocytes. <i>Journal of Biological Chemistry</i> , 1995 , 270, 7037-40	5.4	187
20	Transcriptional activation of the nuclear receptor RZR alpha by the pineal gland hormone melatonin and identification of CGP 52608 as a synthetic ligand. <i>Nucleic Acids Research</i> , 1995 , 23, 327-33 ^{20.1}		228
19	Natural vitamin D3 response elements formed by inverted palindromes: polarity-directed ligand sensitivity of vitamin D3 receptor-retinoid X receptor heterodimer-mediated transactivation. <i>Molecular and Cellular Biology</i> , 1995 , 15, 1154-61	4.8	122
18	Mechanisms of Nuclear Signalling by Vitamin D3. Interplay with Retinoid and Thyroid Hormone Signalling. <i>FEBS Journal</i> , 1995 , 231, 517-527		4
17	The induction and functions of murine T-helper cell subsets. <i>Journal of Investigative Dermatology</i> , 1995 , 105, 8S-13S	4.3	4
16	Mechanisms of Nuclear Signalling by Vitamin D3. Interplay with Retinoid and Thyroid Hormone Signalling. <i>FEBS Journal</i> , 1995 , 231, 517-527		132
15	Mechanisms of nuclear signalling by vitamin D3 1995 , 233-243		
14	Thyroid hormone and retinoic acid receptors form heterodimers with retinoid X receptors on direct repeats, palindromes, and inverted palindromes. <i>DNA and Cell Biology</i> , 1994 , 13, 333-41	3.6	36
13	Response element selectivity for heterodimerization of vitamin D receptors with retinoic acid and retinoid X receptors. <i>Journal of Molecular Endocrinology</i> , 1994 , 12, 327-39	4.5	48
12	RZRs, a new family of retinoid-related orphan receptors that function as both monomers and homodimers. <i>Molecular Endocrinology</i> , 1994 , 8, 757-70		189
11	Identification and characterization of a vitamin D3 response element of chicken carbonic anhydrase-II. <i>DNA and Cell Biology</i> , 1994 , 13, 1181-7	3.6	37
10	Vitamin D3-thyroid hormone receptor heterodimer polarity directs ligand sensitivity of transactivation. <i>Nature</i> , 1994 , 370, 382-6	50.4	126
9	Identification of a vitamin D receptor homodimer-type response element in the rat calcitriol 24-hydroxylase gene promoter. <i>Biochemical and Biophysical Research Communications</i> , 1994 , 202, 1366-7 ²⁴		47
8	The 1,25-dihydroxyvitamin D3 (VD) analogues MC903, EB1089 and KH1060 activate the VD receptor: homodimers show higher ligand sensitivity than heterodimers with retinoid X receptors. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 1994 , 51, 137-42	5.1	49
7	RXR-independent action of the receptors for thyroid hormone, retinoid acid and vitamin D on inverted palindromes. <i>Biochemical and Biophysical Research Communications</i> , 1993 , 195, 1345-53	3.4	42
6	RXR-dependent and RXR-independent transactivation by retinoic acid receptors. <i>Nucleic Acids Research</i> , 1993 , 21, 1231-7	20.1	51
5	9-cis-retinoic acid is a natural antagonist for the retinoic acid receptor response pathway. <i>Biochemical Journal</i> , 1993 , 295 (Pt 2), 343-6	3.8	27

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| 4 | Two nuclear signalling pathways for vitamin D. <i>Nature</i> , 1993 , 361, 657-60 | 50.4 | 482 |
| 3 | Fluorescence resonance energy transfer analysis of the structure of the four-way DNA junction. <i>Biochemistry</i> , 1992 , 31, 4846-56 | 3.2 | 257 |
| 2 | A functional approach to the mapping of structural polymorphisms in superhelical DNA. <i>Biochemical Pharmacology</i> , 1988 , 37, 1847-8 | 6 | |
| 1 | Sequencing refractory GC rich regions in plasmid DNA. <i>Nucleic Acids Research</i> , 1987 , 15, 2779 | 20.1 | 2 |