

# Paul C Dechow

## List of Publications by Year in descending order

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91  
papers

4,140  
citations

117625

34  
h-index

118850

62  
g-index

95  
all docs

95  
docs citations

95  
times ranked

3444  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fibroblast growth factor 21 promotes bone loss by potentiating the effects of peroxisome proliferator-activated receptor $\beta$ . Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3143-3148.	7.1	331
2	Modeling elastic properties in finite-element analysis: How much precision is needed to produce an accurate model?. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology, 2005, 283A, 275-287.	2.0	243
3	The feeding biomechanics and dietary ecology of <i>Australopithecus africanus</i> . Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2124-2129.	7.1	232
4	PGC1 $\beta$ Mediates PPAR $\beta$ Activation of Osteoclastogenesis and Rosiglitazone-Induced Bone Loss. Cell Metabolism, 2010, 11, 503-516.	16.2	216
5	Finite element analysis in functional morphology. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology, 2005, 283A, 259-274.	2.0	203
6	Biphasic and Dosage-Dependent Regulation of Osteoclastogenesis by $\beta$ -Catenin. Molecular and Cellular Biology, 2011, 31, 4706-4719.	2.3	161
7	Material properties of the human cranial vault and zygoma. The Anatomical Record, 2003, 274A, 785-797.	1.8	157
8	Occlusal force and craniofacial biomechanics during growth in rhesus monkeys. American Journal of Physical Anthropology, 1990, 83, 219-237.	2.1	132
9	Elastic properties and masticatory bone stress in the Macaque mandible. American Journal of Physical Anthropology, 2000, 112, 553-574.	2.1	124
10	Modeling masticatory muscle force in finite element analysis: Sensitivity analysis using principal coordinates analysis. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology, 2005, 283A, 288-299.	2.0	121
11	The Feeding Biomechanics and Dietary Ecology of <i>Paranthropus boisei</i> . Anatomical Record, 2015, 298, 145-167.	1.4	100
12	Masticatory biomechanics and its relevance to early hominid phylogeny: An examination of palatal thickness using finite-element analysis. Journal of Human Evolution, 2007, 52, 585-599.	2.6	98
13	Viewpoints: Diet and dietary adaptations in early hominins: The hard food perspective. American Journal of Physical Anthropology, 2013, 151, 339-355.	2.1	89
14	In vivo bone strain and finite-element modeling of the craniofacial haft in catarrhine primates. Journal of Anatomy, 2011, 218, 112-141.	1.5	83
15	Material properties of the inner and outer cortical tables of the human parietal bone. The Anatomical Record, 2002, 268, 7-15.	1.8	82
16	Material properties of the dentate maxilla. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology, 2006, 288A, 962-972.	2.0	76
17	The Structural Rigidity of the Cranium of <i>Australopithecus africanus</i> : Implications for Diet, Dietary Adaptations, and the Allometry of Feeding Biomechanics. Anatomical Record, 2010, 293, 583-593.	1.4	70
18	Inheritance of sutural pattern at the pterion in rhesus monkey skulls. The Anatomical Record Part A: Discoveries in Molecular, Cellular, and Evolutionary Biology, 2006, 288A, 1042-1049.	2.0	66

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19	In vitro strain measurements in the condylar process of the human mandible. <i>Archives of Oral Biology</i> , 1994, 39, 853-867.	1.8	65
20	Elastic properties of external cortical bone in the craniofacial skeleton of the rhesus monkey. <i>American Journal of Physical Anthropology</i> , 2006, 131, 402-415.	2.1	61
21	Fusion patterns of craniofacial sutures in rhesus monkey skulls of known age and sex from Cayo Santiago. <i>American Journal of Physical Anthropology</i> , 2006, 131, 469-485.	2.1	57
22	A method of bite force measurement in primates. <i>Journal of Biomechanics</i> , 1983, 16, 797-802.	2.1	55
23	A comparison of cortical elastic properties in the craniofacial skeletons of three primate species and its relevance to the study of human evolution. <i>Journal of Human Evolution</i> , 2006, 51, 375-382.	2.6	51
24	Adaptation of the suprahyoid muscle complex to mandibular advancement surgery. <i>American Journal of Orthodontics and Dentofacial Orthopedics</i> , 1987, 92, 134-143.	1.7	50
25	Biomechanical Implications of Intraspecific Shape Variation in Chimpanzee Crania: Moving Toward an Integration of Geometric Morphometrics and Finite Element Analysis. <i>Anatomical Record</i> , 2015, 298, 122-144.	1.4	47
26	Edentulation Alters Material Properties of Cortical Bone in the Human Craniofacial Skeleton: Functional Implications for Craniofacial Structure in Primate Evolution. <i>Anatomical Record</i> , 2010, 293, 618-629.	1.4	45
27	An investigation of the oral pathologies occurring in bulimia nervosa. <i>International Journal of Eating Disorders</i> , 1990, 9, 191-199.	4.0	43
28	Mechanical evidence that <i>Australopithecus sediba</i> was limited in its ability to eat hard foods. <i>Nature Communications</i> , 2016, 7, 10596.	12.8	43
29	Human feeding biomechanics: performance, variation, and functional constraints. <i>PeerJ</i> , 2016, 4, e2242.	2.0	43
30	Regional, ontogenetic, and sex-related variations in elastic properties of cortical bone in baboon mandibles. <i>American Journal of Physical Anthropology</i> , 2010, 141, 526-549.	2.1	41
31	Osteoclast Progenitors Reside in the Peroxisome Proliferator-Activated Receptor $\beta$ -Expressing Bone Marrow Cell Population. <i>Molecular and Cellular Biology</i> , 2011, 31, 4692-4705.	2.3	41
32	HDAC7 Inhibits Osteoclastogenesis by Reversing RANKL-Triggered $\beta$ -Catenin Switch. <i>Molecular Endocrinology</i> , 2013, 27, 325-335.	3.7	40
33	Orexin Regulates Bone Remodeling via a Dominant Positive Central Action and a Subordinate Negative Peripheral Action. <i>Cell Metabolism</i> , 2014, 19, 927-940.	16.2	38
34	How does the amount of surgical insult affect bone around moving teeth?. <i>American Journal of Orthodontics and Dentofacial Orthopedics</i> , 2014, 145, S92-S99.	1.7	38
35	Material properties of mandibular cortical bone in the American alligator, <i>Alligator mississippiensis</i> . <i>Bone</i> , 2010, 46, 860-867.	2.9	36
36	In vivo bone strain and finite element modeling of a rhesus macaque mandible during mastication. <i>Zoology</i> , 2017, 124, 13-29.	1.2	36

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37	Bone strain following application of a rigid bone plate: An in vitro study in human mandibles. <i>Journal of Oral and Maxillofacial Surgery</i> , 1992, 50, 1066-1073.	1.2	34
38	A finite element analysis of masticatory stress hypotheses. <i>American Journal of Physical Anthropology</i> , 2011, 145, 1-10.	2.1	34
39	Review of <i>In Vivo</i> Bone Strain Studies and Finite Element Models of the Zygomatic Complex in Humans and Nonhuman Primates: Implications for Clinical Research and Practice. <i>Anatomical Record</i> , 2016, 299, 1753-1778.	1.4	32
40	Probabilistic finite element analysis of a craniofacial finite element model. <i>Journal of Theoretical Biology</i> , 2012, 300, 242-253.	1.7	30
41	Twist1 Is Essential for Tooth Morphogenesis and Odontoblast Differentiation. <i>Journal of Biological Chemistry</i> , 2015, 290, 29593-29602.	3.4	28
42	Ontogeny and diachronic changes in sexual dimorphism in the craniofacial skeleton of rhesus macaques from Cayo Santiago, Puerto Rico. <i>Journal of Human Evolution</i> , 2007, 53, 350-361.	2.6	27
43	Additional fossil <i>Theropithecus</i> from Hopefield, South Africa: A comparison with other African sites and a reevaluation of its taxonomic status. <i>American Journal of Physical Anthropology</i> , 1984, 63, 405-435.	2.1	26
44	Occlusal force after mandibular advancement in adult rhesus monkeys. <i>Journal of Oral and Maxillofacial Surgery</i> , 1986, 44, 887-893.	1.2	24
45	Microwear, mechanics and the feeding adaptations of <i>Australopithecus africanus</i> . <i>Journal of Human Evolution</i> , 2012, 62, 165-168.	2.6	24
46	Short-term stability and muscle adaptation after mandibular advancement surgery with and without suprahyoid myotomy in juvenile <i>Macaca mulatta</i> . <i>Oral Surgery, Oral Medicine, and Oral Pathology</i> , 1989, 68, 135-149.	0.6	23
47	Force level and strain patterns during bilateral mandibular osteodistraction. <i>Journal of Oral and Maxillofacial Surgery</i> , 2000, 58, 171-178.	1.2	23
48	Two distalization methods compared in a novel patient-specific finite element analysis. <i>American Journal of Orthodontics and Dentofacial Orthopedics</i> , 2019, 156, 326-336.	1.7	23
49	Biomechanical Strain and Morphologic Changes with Age in Rat Calvarial Bone and Sutures. <i>Plastic and Reconstructive Surgery</i> , 2007, 119, 2167-2178.	1.4	22
50	Estimation of body weights from craniometric variables in baboons. <i>American Journal of Physical Anthropology</i> , 1983, 60, 113-123.	2.1	21
51	Biomechanical implications of cortical elastic properties of the macaque mandible. <i>Zoology</i> , 2017, 124, 3-12.	1.2	20
52	Craniofacial Strain Patterns During Premolar Loading: Implications for Human Evolution. , 2008, , 173-198.		20
53	Biomechanics of <i>Human</i> <i>Craniomaxillary</i> <i>Force</i> <i>Transmission</i> <i>in</i> <i>South</i> <i>African</i> <i>Australopithecus</i> : <i>An</i> <i>Experimental</i> <i>Study</i> <i>Using</i> <i>Finite</i> <i>Element</i> <i>Analysis</i> . <i>Anatomical Record</i> . 2017. 300. 171-195.	1.4	19
54	Surface Strain on Bone and Sutures in a Monkey Facial Skeleton: An In Vitro Approach and its Relevance to Finite Element Analysis. , 2008, , 149-172.		19

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55	A comparison of stimulated bite force after mandibular advancement using rigid and nonrigid fixation. <i>Journal of Oral and Maxillofacial Surgery</i> , 1988, 46, 26-32.	1.2	18
56	The mandibles of castrated male rhesus macaques ( <i>Macaca mulatta</i> ): The effects of orchidectomy on bone and teeth. <i>American Journal of Physical Anthropology</i> , 2016, 159, 31-51.	2.1	18
57	Effects of latency on the quality and quantity of bone produced by dentoalveolar distraction osteogenesis. <i>American Journal of Orthodontics and Dentofacial Orthopedics</i> , 2011, 140, 470-478.	1.7	17
58	Biomechanics of the mandible of <i>Macaca mulatta</i> during the power stroke of mastication: Loading, deformation, and strain regimes and the impact of food type. <i>Journal of Human Evolution</i> , 2020, 147, 102865.	2.6	17
59	Structural properties of mandibular bone following application of a bone plate. <i>Journal of Oral and Maxillofacial Surgery</i> , 1995, 53, 1044-1051.	1.2	16
60	Elastic anisotropy and off-axis ultrasonic velocity distribution in human cortical bone. <i>Journal of Anatomy</i> , 2011, 218, 26-39.	1.5	14
61	The Winds of Change Revisited: Progress Towards Building a Culture of Evidence-Based Dentistry. <i>Journal of Dental Education</i> , 2015, 79, 499-509.	1.2	14
62	Biomechanical effects of fixed partial denture therapy on strain patterns of the mandible. <i>Journal of Prosthetic Dentistry</i> , 2006, 95, 55-62.	2.8	13
63	Development, Structure, and Function of the Zygomatic Bones: What is New and Why Do We Care?. <i>Anatomical Record</i> , 2016, 299, 1611-1615.	1.4	12
64	Electromyography of the suprahyoid musculature following mandibular advancement with and without rigid fixation. <i>Journal of Oral and Maxillofacial Surgery</i> , 1990, 48, 49-53.	1.2	11
65	Three-Dimensional Evaluation of Mandibular Bone Regenerated By Bone Transport Distraction Osteogenesis. <i>Calcified Tissue International</i> , 2011, 89, 43-52.	3.1	10
66	Architecture and Microstructure of Cortical Bone in Reconstructed Canine Mandibles After Bone Transport Distraction Osteogenesis. <i>Calcified Tissue International</i> , 2011, 89, 379-388.	3.1	10
67	Relationship Between Three-Dimensional Microstructure and Elastic Properties of Cortical Bone in the Human Mandible and Femur. , 2008, , 265-292.		10
68	Biomechanical Configurations of Mandibular Transport Distraction Osteogenesis Devices. <i>Tissue Engineering - Part B: Reviews</i> , 2010, 16, 273-283.	4.8	9
69	Bone Regeneration and Docking Site Healing After Bone Transport Distraction Osteogenesis in the Canine Mandible. <i>Journal of Oral and Maxillofacial Surgery</i> , 2012, 70, 429-439.	1.2	9
70	Elevation of a full-thickness mucoperiosteal flap alone accelerates orthodontic tooth movement. <i>American Journal of Orthodontics and Dentofacial Orthopedics</i> , 2017, 152, 49-57.	1.7	9
71	Divided Zygomatic Bone in Primates with Implications of Skull Morphology and Biomechanics. <i>Anatomical Record</i> , 2016, 299, 1801-1829.	1.4	8
72	Creating an evidence-based dentistry culture at Baylor College of Dentistry: the winds of change. <i>Journal of Dental Education</i> , 2011, 75, 279-90.	1.2	8

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73	Elastic Properties of Chimpanzee Craniofacial Cortical Bone. <i>Anatomical Record</i> , 2016, 299, 1718-1733.	1.4	7
74	Divided zygoma in Holocene human populations from Northern China. <i>American Journal of Human Biology</i> , 2019, 31, e23314.	1.6	6
75	Biomechanical characteristics of regenerated cortical bone in the canine mandible. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2011, 5, 551-559.	2.7	5
76	Internal Bone Architecture in the Zygoma of Human and <i>Pan</i> . <i>Anatomical Record</i> , 2016, 299, 1704-1717.	1.4	5
77	The winds of change revisited: progress towards building a culture of evidence-based dentistry. <i>Journal of Dental Education</i> , 2015, 79, 499-509.	1.2	5
78	Changes in Biomechanical Strain and Morphology of Rat Calvarial Sutures and Bone After Tgf $\beta$ 3 Inhibition of Posterior Interfrontal Suture Fusion. <i>Anatomical Record</i> , 2012, 295, 928-938.	1.4	4
79	Odontogenic abscesses in rhesus macaques ( <i>Macaca mulatta</i> ) of Cayo Santiago. <i>American Journal of Physical Anthropology</i> , 2018, 167, 441-457.	2.1	4
80	Dentate Transport Discs Can Be Used to Reconstruct Large Segmental Mandibular Defects. <i>Journal of Oral and Maxillofacial Surgery</i> , 2015, 73, 745-758.	1.2	3
81	Masticatory properties in pre-modern Holocene populations from Northern China. <i>HOMO- Journal of Comparative Human Biology</i> , 2019, 70, 15-30.	0.7	3
82	Osseointegration of Dental Implants Placed into Canine Mandibular Bone Regenerated by Bone Transport Distraction Osteogenesis. <i>International Journal of Oral and Maxillofacial Implants</i> , 2013, 28, 677-686.	1.4	2
83	Vacuum-induced Suction Stimulates Increased Numbers of Blood Vessels in Healthy Dog Gingiva. <i>Wounds</i> , 2012, 24, 99-109.	0.5	2
84	Mechanical compensation in the evolution of the early hominin feeding apparatus. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2022, 289, .	2.6	2
85	Changes in Mandibular Cortical Bone Density and Elastic Properties during Growth. , 2017, , 128-147.		1
86	Biomechanics of the Canine Mandible During Bone Transport Distraction Osteogenesis. <i>Journal of Biomechanical Engineering</i> , 2014, 136, .	1.3	0
87	In Vitro Mechanical Evaluation of Mandibular Bone Transport Devices. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2014, 8, .	0.7	0
88	Biomechanical characteristics of cortical bone regenerate after mandibular distraction osteogenesis in dogs. <i>FASEB Journal</i> , 2009, 23, 650.3.	0.5	0
89	Considering the constrained lever model: Feeding biomechanics of OH 5 assessed using finite element analysis. <i>FASEB Journal</i> , 2013, 27, 520.6.	0.5	0
90	Regional material heterogeneity in craniofacial cortical bone of the genus <i>Pan</i> . <i>FASEB Journal</i> , 2013, 27, 756.7.	0.5	0

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91	The Vulnerability of the Temporomandibular Joint in Recent Northern China Populations. FASEB Journal, 2018, 32, 514.3.	0.5	0