

**CURRICULUM VITAE**  
Thomas Oliver Carpenter

Address: 695 Royal Lane, Orange, CT 06477  
Date of Birth: June 26, 1952  
Place of Birth: Ayer, MA  
Married: to Caren M. Gundberg; 1 son, Matthew (b. 1988)

**Education:**

1973 B.A. University of Virginia - with distinction  
1977 M.D. University of Alabama Medical School

**Postdoctoral Training:**

*Internship and Residencies:*

1977-1978 Intern in Pediatrics, Children's Hosp., Univ. of Ala., Birmingham  
1978-1980 Resident in Pediatrics, Children's Hosp., Univ. of Ala., Birmingham

*Fellowship:*

1980-1983 Fellow in Medicine (Endocrinology), Children's Hospital, Boston, MA  
and Research Fellow in Pediatrics, Harvard Medical School, Boston

**Licensure and Certification:**

1978 Alabama Medical License  
1980 Massachusetts Medical License  
1982 American Board of Pediatrics  
1983 American Board of Pediatrics - Subspecialty in Endocrinology  
1986 Connecticut Medical License  
1999 American Board of Pediatrics/Endocrinology: Recertification (voluntary)

**Membership in Professional Organizations:**

American Pediatric Society  
American Society for Bone and Mineral Research  
Endocrine Society  
Pediatric Endocrine Society  
Society for Pediatric Research

**Editorial Boards:**

1988-1995 Magnesium Research  
1997-2004 Current Opinion in Pediatrics  
2001-2004 Journal of Clinical Endocrinology and Metabolism  
2010-2015 Journal of Bone and Mineral Research  
2018- Associate Editor, Journal of Bone and Mineral Research

**Academic Appointments:**

1983-1986 Instructor in Pediatrics, Harvard Medical School, Boston, MA  
1986-1991 Assist. Professor, Pediatrics, Yale U. School of Medicine, New Haven, CT  
1991-2000 Associate Professor of Pediatrics, Yale University School of Medicine  
2000- Professor of Pediatrics, Yale University School of Medicine  
2007-2014 Clinical Professor, Yale University School of Nursing  
2008- Professor of Orthopaedics and Rehabilitation, Yale University School of Medicine

**Hospital Appointments:**

1983-1986 Assistant in Medicine (Endocrinology), Children's Hospital, Boston, MA  
1986- Attending Physician (Pediatrics), Yale-New Haven Hospital, New Haven, CT

**Awards and Honors:**

1973 Bachelor of Arts with Distinction, University of Virginia  
1982 Endocrine Research Award Fellowship, Harvard Medical School  
1992 Visiting Professor, Dalhousie Univ. Med. Sch., Halifax, Nova Scotia  
1993, 2018 Constantine Anast Lecturer, Harvard Medical School, Boston  
1994 Hulda Wohltmann Lecturer, Med. Univ. of S. Carolina, Charleston  
1994-2018 Named in Best Doctors in America  
1996 Kroc Foundation Visiting Professor, Univ. of Ok Health Sciences Center, Oklahoma City  
  
1999-2018 Invited Speaker: Endocrine Society, Pediatric Academic Societies, American Society for Bone and Mineral Research (ASBMR)  
2001-2 Chair, Endocrinology Sub-board, American Board of Pediatrics  
2003-14 Named in Top Doctors: New York Metro Area  
2003 Named to Endocrine and Metabolic Drugs Advisory Committee of the US FDA  
2004-11 Named as one of "America's Top Pediatricians"  
2005-10 Named as one of New York Magazine's "Best Doctors in New York"  
2006 12th annual Jud Van Wyk Lecturer, Univ. No. Carolina Sch. of Med, Chapel Hill  
2006 Pfizer/Endocrine Society International Award for Excellence in Published Clinical Research in *The Journal of Clinical Endocrinology & Metabolism*  
2006 George Lowry Lecturer, University of Michigan Medical School, Ann Arbor  
2010 Annual Visiting Professorship in Pedi. Endo., Hosp. for Sick Children, Toronto  
2011 Elected to Membership: Connecticut Academy of Science and Engineering  
2011 Invited Speaker: Society for Endocrinology (Birmingham, UK) and Japanese Society for Bone and Mineral Research (Osaka, Japan)  
2011-12 Named to US News and World Reports "Top Doctors"  
2012- Named in "Who's Who in America"  
2012 Invited Speaker: 6<sup>th</sup> International Conference on Osteoporosis and Bone Research, Xi'An, China; FGF23 Symposium, Beijing Children's Hospital; Endocrine Grand Rounds, Brigham and Women's Hospital, Boston  
2013 Invited Speaker: Sanford Burnham Rare Diseases Symposium, La Jolla; Visiting Professor, Univ. of Cincinnati; Univ. of Oklahoma Health Sciences Center  
2013 Most Outstanding Clinical Abstract Award, Am. Society for Bone and Mineral Research  
2014 Invited Symposium Speaker: Society for Endocrinology (Liverpool, UK); Endocrine Society (Chicago); Invited Speaker: Endocrine Grand Rounds, Mass. General Hosp., Boston  
2014 Global Genes RARE Diseases Champion of Hope Award (Medical Caregiver for X-linked Hypophosphatemia)  
2015 Invited Speaker: Advances in Mineral Metabolism meeting, Snowmass, Colorado  
2015 Invited Symposium Speaker: 7<sup>th</sup> Internat. Conf. on Children's Bone Health: Salzburg, Austria  
2016 Invited Speaker: NIH (NICHD, Development Endocrine Branch and NICDR); International Symposium on X-Linked Hypophosphatemia, Paris (Keynote lecture); European Society for Pediatric Endocrinology, Paris.  
2018 John Haddad Lecturer, University of Pennsylvania School of Medicine.  
2019 Alvin B. Hayles Visiting Professor, Mayo Clinic, Rochester, Minn.  
2019 Named as Fellow, American Society of Bone and Mineral Research  
2020 American Society of Bone and Mineral Research Pediatric Working Group 2<sup>nd</sup> Annual Award for Contributions to Bone Health

**Teaching Experience:**

|           |                                                                                                                                                                                           |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1980      | Lecturer in pathophysiology, Massachusetts College of Pharmacy (Undergraduate and graduate curricula)                                                                                     |
| 1982-1984 | Lecturer in Medical Biochemistry, Harvard-MIT Program in Health Sciences and Technology                                                                                                   |
| 1983-1985 | Lecturer in Connective and Mineralized Tissue, Department of Oral Biology, Harvard Dental School                                                                                          |
| 1980-1986 | Clinical Teaching, Children's Hospital, Boston, MA                                                                                                                                        |
| 1987-1989 | Thesis advisor for medical student, Yale Medical School: <i>25-Hydroxyvitamin D-1alpha-Hydroxylase Stimulation by Parathyroid Hormone-like Peptide</i> (A.T. Walker, honors thesis award) |
| 1988-     | Endocrine Module Instructor, 2 <sup>nd</sup> Year Medical Class, Yale School of Medicine                                                                                                  |
| 1990-1993 | Thesis advisor for medical student, Yale Medical School: <i>Effects of Ischemia and Reperfusion on Mitochondrial Phosphate Uptake in Rat Renal Proximal Tubules</i> (Samer Najjar)        |
| 2005-2009 | Thesis advisor/co-mentor for Ph.D candidate in the Department of Genetics (Catherine Mendenhall Brownstein)                                                                               |

**Principal Service Responsibilities:**

|              |                                                                                                                        |
|--------------|------------------------------------------------------------------------------------------------------------------------|
| 1983-1986    | Attending Physician, Medical Service, Children's Hospital, Boston, MA                                                  |
| 1983-1986    | Attending Physician, Endocrine Unit and Clinic, Children's Hospital, Boston                                            |
| 1986-        | Attending Physician (Pediatrics), Yale-New Haven Hospital, New Haven, CT                                               |
| 1988-2006    | Internship Selection Committee, Department of Pediatrics, Yale Univ. School of Medicine and Yale-New Haven Hospital    |
| 1989-2009    | Director, Pediatric Endocrine Fellowship Training Program, Yale University School of Medicine, Yale-New Haven Hospital |
| 1991-1998    | Pediatric Grand Rounds Coordinator, Yale Univ. School of Medicine                                                      |
| 1999-2005    | Co-Director, Residency and Fellowship Medical Ethics Seminar Series                                                    |
| 2001, 2008-9 | Acting Chief, Endocrine Section, Yale Univ. Dept. of Pediatrics                                                        |
| 2001-2003    | Yale University Conflict of Interest Committee                                                                         |
| 2001-2008    | Research Subject Advocate, Yale School of Med., Clinical Research Center                                               |
| 2001-        | Chair, Pediatric Clinical Research Protocol Review Committee                                                           |
| 2002-2008    | Co-Chair, Pediatric Ethics Committee, Yale-New Haven Hospital                                                          |
| 2003-2014    | Ethics Committee, Yale-New Haven Hospital                                                                              |
| 2006-2008    | Term Appointments and Promotions Committee, Yale Univ. Sch. of Medicine                                                |
| 2009-        | Medical Director, Hospital Research Unit of the Yale Center for Clinical Investigation                                 |
| 2013-        | Chair, Department of Pediatrics Appointments and Promotions Committee, Yale Univ. Sch. of Medicine                     |

**National Service:**

|             |                                                                                                                         |
|-------------|-------------------------------------------------------------------------------------------------------------------------|
| 1991, 1993, |                                                                                                                         |
| 1999, 2005, | Instructor, Lawson Wilkins Pediatric Endocrinology Society Pediatric                                                    |
| 2007, 2012  | Endocrinology Review Course                                                                                             |
| 1994        | Chair, Pediatric Bone and Mineral Working Group, ASBMR                                                                  |
| 1995-2005   | Ad Hoc Reviewer, Veterans Administration, Medical Research Council of Great Britain, Medical Research Council of Canada |
| 1996        | Appointed to Pediatric Endocrinology Sub-board, Am. Bd. of Pediatrics                                                   |
| 1999-2004   | Medical Advisory Board, Charles H. Hood Foundation, Boston                                                              |

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| 1999, 2008 | Reviewer/site visitor, Developmental Endocrinology Branch Intramural Program, NICHD                                                                                            |
| 2001-4     | Member, Data Safety and Monitoring Board for Study of Alendronate in Children with Osteogenesis Imperfecta (Merck)                                                             |
| 2003-2018  | NIH Reviewer, Ad Hoc Study Sections                                                                                                                                            |
| 2004-6     | Chair, Data Safety and Monitoring Board for NIH-sponsored study: The Effect of Vitamin D and Calcium on Bone in HIV-infected Children and Adolescents (Dr. Stephen Arpadi, PI) |
| 2005-      | Scientific Advisory Board, The XLH-Network                                                                                                                                     |
| 2007, 2013 | Expert Panelist, Internat. Clin. Densitometry Soc. Pedi.Task Force Conference                                                                                                  |
| 2007       | Scientific Advisory Committee, 4 <sup>th</sup> Int. Conf. on Children's Bone Health, Montreal                                                                                  |
| 2008-2017  | Member, Data Safety and Monitoring Board for Study of Enzyme Replacement Therapy in Hypophosphatasia (Enobia/Alexion)                                                          |
| 2010       | Panelist, NIH Consensus Development Conference on Lactose Intolerance and Health                                                                                               |
| 2013       | Ad hoc member, Endocrine and Metabolic Drugs Advisory Committee, US FDA                                                                                                        |
| 2011-      | Scientific Advisory Board, Fibrous Dysplasia Foundation                                                                                                                        |
| 2012-      | Scientific Advisory Board, Soft Bones Foundation                                                                                                                               |
| 2016-      | Scientific Advisory Board, Rare Bone Disease Alliance                                                                                                                          |

## **BIBLIOGRAPHY**

### ***Original Articles***

1. *Carpenter TO*: Basic pediatrics: a new American physician in an African village hospital. *South Med J* 72:209-214, 1979.
2. *Carpenter TO*, Carnes DL, Anast CS: Hypoparathyroidism in Wilson's disease. *N Engl J Med* 309:873-877, 1983.
3. Cole DEC, *Carpenter TO*, Gundberg CM: Serum osteocalcin levels in children with metabolic bone disease. *J Pediatr* 106:770-776, 1985.
4. *Carpenter TO*, Levy HL, Holtrop ME, Shih VE, Anast CS: Lysinuric protein intolerance presenting as juvenile osteoporosis: clinical and skeletal response to citrulline therapy. *N Engl J Med* 312:290-294, 1985.
5. Harris Jr HW, *Carpenter TO*, Shanley P, Rosen S, Levey RH, Harmon WE: A progressive tubulointerstitial renal disease in infancy with associated hepatic abnormalities: a report of clinical, biochemical and pathologic findings in two cases. *Am J Med* 81:169-176, 1986.
6. *Carpenter TO*, Lebowitz RL, Nelson D, Bauer S: Hereditary xanthinuria presenting in infancy with nephrolithiasis. *J Pediatr* 109:307-309, 1986.
7. Cole DEC, *Carpenter TO*: Bone fragility, craniosynostosis, ocular proptosis, hydrocephalus and distinctive facial features: a newly recognized type of osteogenesis imperfecta. *J Pediatr* 110:76-80, 1987.
8. *Carpenter TO*, Carnes DL, Anast CS: Effect of magnesium depletion upon metabolism of 25-hydroxyvitamin D in rats. *Am J Physiol* 253 (Endocrinol Metab 16):E106-E113, 1987.

9. *Carpenter TO*, Pettifor JM, Russell RM, Pitha J, Mobarhan S, Ossip MS, Wainer S, Anast CS. Severe hypervitaminosis A in siblings: evidence of variable tolerance to retinol intake. *J Pediatr* 111:507-512, 1987.
10. *Carpenter TO*, Pendrak ML, Anast CS: Metabolism of 25-hydroxyvitamin D in the copper-laden rat: a model of Wilson's disease. *Am J Physiol* 254 (Endocrinol Metab 17): E150-E154, 1988.
11. *Carpenter TO*: Disturbances of vitamin D metabolism and action during clinical and experimental magnesium deficiency. *Magnesium Research* 1:131-139, 1988.
12. *Carpenter TO*: Mineral regulation of vitamin D metabolism. *Bone and Mineral* 5:259-269, 1989.
13. Chen C, *Carpenter TO*, Steg N, Baron R, Anast CS: Hypercalciuric hypophosphatemic rickets: mineral balance, bone histomorphometry, and therapeutic implications of hypercalciuria. *Pediatrics* 84:276-280, 1989.
14. Cooper SG, Richman AH, *Carpenter TO*, Rosenfield AT: Scrotal ultrasonography in Leydig cell hyperplasia. *J Ultrasound Med* 8:689-692, 1989.
15. New England Congenital Hypothyroidism Collaborative: Elementary school performance of children with congenital hypothyroidism. *J Pediatr* 116:27-33, 1990.
16. *Carpenter TO*, Insogna KI, Boulware SD, Mitnick MA: Vitamin D metabolism in chronic childhood hypoparathyroidism: evidence for a direct regulatory effect of calcium. *J Pediatr* 116:252-257, 1990.
17. Walker AT, Stewart AF, Korn EA, Shiratori T, Mitnick MA, *Carpenter TO*: Effect of parathyroid hormone-like peptides on 25-hydroxyvitamin D-1"-hydroxylase activity in rodents. *Am J Physiol* 258 (Endocrinol Metab 21):E297-E303, 1990.
18. *Carpenter TO*, Imperato-McGinley J, Boulware SD, Weiss R, Shackleton C, Griffen JE, Wilson JD: Variable expression of 5 $\alpha$ -reductase deficiency: presentation with male phenotype in a child of Greek origin. *J Clin Endocrinol Metab* 71:318-322, 1990.
19. *Carpenter TO*: A new compendium for pediatric bone disease (Invited Book Review). *Trends in Endocrinol and Metab.* 1:373-374, 1990.
20. *Carpenter TO*, Shiratori T: Renal 25-hydroxyvitamin D-1 $\alpha$ -hydroxylase activity and mitochondrial phosphate transport in Hyp mouse. *Am J Physiol* 259 (Endocrinol Metab 22):E814-E821, 1990.
21. Caprio S, Boulware S, Diamond M, Sherwin RS, Rubin K, *Carpenter TO*, Amiel S, Press CM, Tamborlane WV: Insulin resistance: an early metabolic defect of Turner syndrome. *J Clin Endocrinol Metab* 72:832-836, 1991.
22. Caprio S, Boulware SD, Press M, Sherwin RS, Rubin K, *Carpenter TO*, Plewe G, Tamborlane WM. Effect of growth hormone treatment on hyperinsulinemia associated with Turner syndrome. *J Pediatr* 120:238-243, 1992.

23. Irie T, Fukuanga K, Garwood MK, *Carpenter TO*, Pitha J, Pitha J: Hydroxypropylcyclodextrins in parenteral use. II: effects on transport and disposition of lipids in rabbit and humans. *J Pharm Sci* 81:524-528, 1992.
24. *Carpenter TO*, McPhee DM, Bort R, Mitnick MA, Carnes DL: Dissociation of phosphaturia and 25-hydroxyvitamin D-1 $\alpha$ -hydroxylase trophism using a novel analogue of parathyroid hormone. *Am J Physiol* 262 (Endocrinol Metab 25): E483-E487, 1992.
25. Gundberg CM, Clough ME, *Carpenter TO*: A radioimmunoassay for mouse osteocalcin: development validation and application in the *Hyp* mouse. *Endocrinology* 130:1909-1915, 1992.
26. *Carpenter TO*, Mackowiak SJ, Troiano N, Gundberg CM: Osteocalcin and its message: relationship to bone histology in the magnesium-deprived rat. *Am J Physiol* 263 (Endocrinol Metab 26): E107-114, 1992.
27. Sullivan W, *Carpenter TO*, Glorieux F, Travers R, Insogna K. A prospective trial of phosphate and 1,25-dihydroxyvitamin D<sub>3</sub> therapy on symptomatic adults with X-linked hypophosphatemic rickets. *J Clin Endocrinol Metab* 75:879-885, 1992.
28. *Carpenter TO*, Mitnick MA, Smith C, Ellison A, Insogna KL. Nocturnal hyperparathyroidism: a frequent feature of X-linked hypophosphatemia. *J Clin Endocrinol Metab* 78:1378-1383, 1994.
29. Korn EA, Gaich G, Brines M, *Carpenter TO*. Thyrotropin-secreting adenoma in an adolescent girl without increased serum TSH- $\alpha$ . *Hormone Research* 42:120-123, 1994.
30. *Carpenter TO*, Gerloczy A, Pitha J. Safety of parenteral hydroxypropyl  $\beta$ -cyclodextrin. *J Pharm Sci* 84:222-225, 1995.
31. Korn EA, Van Hoff J, Buckley P, Daughaday WH, *Carpenter TO*. Secretion of a large molecular-weight form of insulin-like growth factor II by a primary renal tumor. *Med Pediatr Oncol* 24:392-396, 1995.
32. Boydstun I, Najjar S, Kashgarian M, *Carpenter T*, Siegel N. Postischemic thyroxin stimulates renal mitochondrial adenine nucleotide translocator activity. *Am J Physiol* 268 (Renal Fluid Electrolyte Physiol 37): F651-F656, 1995.
33. *Carpenter TO*, Ellis B. Media calcium attenuates mitochondrial 1,25(OH)<sub>2</sub>D production in phosphorous or vitamin-D deprived rats. *Pediatric Res* 37:726-730, 1995.
34. *Carpenter TO*, Keller M, Schwartz D, Mitnick M, Smith C, Ellison A, Carey D, Comite F, Horst R, Travers R, Glorieux FH, Gundberg CM, Poole AR, Insogna KL. 24,25 Dihydroxyvitamin D supplementation corrects hyperparathyroidism and improves skeletal abnormalities in X-linked hypophosphatemic rickets -- a clinical research center study. *J Clin Endocrinol Metab* 81: 2381-2388, 1996.
35. *Carpenter TO*, Gundberg CM. Osteocalcin abnormalities in *Hyp* mice reflect altered genetic expression and are not due to altered clearance, affinity for mineral, or ambient phosphorus levels. *Endocrinology* 137:5213-5219, 1996.
36. Nehgme R, Fahey JT, Smith C, *Carpenter TO*. Cardiovascular abnormalities in patients with X-linked hypophosphatemia. *J Clin Endocrinol Metab* 82:2450-2454, 1997.

37. Bentsen D, Schwartz DS, *Carpenter TO*. Sonography of congenital adrenal hyperplasia due to partial deficiency of 3 $\beta$ -hydroxysteroid dehydrogenase: a case report. *Pediatr Radiol* 27: 594-595, 1997.
38. *Carpenter TO*: New perspectives on the biology and treatment of X-linked hypophosphatemic rickets. *Pediatr Clin North Am* 44:443-466, 1997.
39. Kerstetter JE, Caseria DM, Mitnick ME, Ellison AF, Gay LF, Liskov TAP, *Carpenter TO*, Insogna KL. Increased circulating concentrations of parathyroid hormone in healthy, young women consuming a protein-restricted diet. *Am J Clin Nutr* 66: 1188-1196, 1997.
40. Condulis N, Germain G, Charest N, Levy S, *Carpenter TO*: Pseudotumor cerebri: a presenting manifestation of Addison's disease. *Clinical Pediatr* 36:711-714, 1997.
41. *Carpenter TO*, Moltz KC, Ellis B, Andreoli M, McCarthy TL, Centrella M, Bryan D, Gundberg CM. Osteocalcin production in primary osteoblast cultures derived from normal and *Hyp* mice. *Endocrinology* 139:35-43, 1998.
42. Cohen C, Rice EN, Thomas DET, *Carpenter TO*. Diabetes insipidus as a hallmark neuroendocrine complication of neonatal meningitis. *Curr Opin Pediatr* 10:449-452, 1998.
43. Cherniske EM, Sadler LS, Schwartz D, *Carpenter TO*, Pober BR. Early puberty in Williams syndrome. *Clin Dysmorphol* 8:117-121, 1999.
44. Paul E, Van Why S, *Carpenter TO*. Hyperthyroidism: a novel feature of the tubulointerstitial nephritis and uveitis syndrome. *Pediatrics* 104:314-317, 1999.
45. Levine B, *Carpenter TO*. Evaluation and treatment of heritable forms of rickets. *The Endocrinologist* 9:358-365, 1999.
46. Kerstetter JE. Mitnick ME. Gundberg CM. Caseria DM. Ellison AF. *Carpenter TO*. Insogna KL. Changes in bone turnover in young women consuming different levels of dietary protein. *J Clin Endocrinol Metab* 84:1052-1055, 1999.
47. Reyes-Mugica M, Arnsmeier SL, Backeljauw PF, Persing J, Ellis B, *Carpenter TO*. Phosphaturic mesenchymal tumor-induced rickets. *Pediatr Development Pathol* 3:61-69, 2000.
48. Reeves GD, Bachrach S, *Carpenter TO*, Mackenzie WG. Vitamin D-deficiency rickets in adopted children from the former Soviet Union: an uncommon problem with unusual clinical and biochemical features. *Pediatrics* 106: 1484-1488, 2000.
49. Jones AO, Tzenova J, Frappier D, Crumley MJ, Roslin NM, Kos CH, Tieder M, Langman CB, Proesmans W, *Carpenter TO*, Rice A, Anderson D, Morgan K, Fujiwara TM, Tenenhouse HS. Hereditary hypophosphatemic rickets with hypercalciuria is not caused by mutations in the Na/Pi cotransporter NPT2 gene. *J Am Soc Nephrol* 12:507-514, 2001.
50. Holm IA, Nelson AE, Robinson BG, Mason RS, Marsh DJ, Cowell CT, *Carpenter TO*. Mutational analysis and genotype-phenotype correlation of the PHEX gene in X-linked hypophosphatemic rickets. *J Clin Endocrinol Metab* 86:3889-3899, 2001.

51. Moltz KC, Friedman AH, Nehgme RA, Kleinman CS, *Carpenter TO*. Ectopic cardiac calcification associated with hyperparathyroidism in a boy with hypophosphatemic rickets. *Curr Opin Pediatr* 13: 373-375, 2001.
52. DeLucia M, *Carpenter TO*. Rickets in the sunshine? (editorial) *Nutrition* 18:97-99, 2002.
53. *Carpenter TO*. Editorial: Variable degrees of 1- $\alpha$  hydroxylase activity – fine tuning the rachitic rheostat. *J Clin Endocrinol Metab* 87:2421-2423, 2002.
54. *Carpenter TO*. Oncogenic osteomalacia – a complex dance of factors. *New Engl J Med* 348:1705-1708, 2003.
55. DeLucia MC, Mitnick ME, *Carpenter TO*. Nutritional rickets with normal circulating 25-hydroxyvitamin D: a call for re-examining the role of dietary calcium intake in North American children. *J Clin Endocrinol Metab* 88:3539-3545, 2003.
56. Yusuf K, Reyes-Mugica M, *Carpenter TO*. Insular carcinoma of the thyroid in an adolescent: a case report and review of the literature. *Curr Opin Pediatr* 15:512-515, 2003.
57. Gordon CM, Bachrach LK, *Carpenter TO*, Karsenty G, Rauch F. Bone health in children and adolescents. *Curr Probl Pediatr Adolesc Health Care* 34:221-248, 2004.
58. Cherniske E, *Carpenter TO*, Klaiman C, Young E, Bregman J, Insogna K, Schultz RT, Pober, BR. Multisystem study of 20 older adults with Williams syndrome. *Am J Med Genet*, 131A:255-264, 2004.
59. *Carpenter TO*, Ellis BK, Insogna KL, Philbrick WM, Sterpka J, Shimkets R. FGF7 – an inhibitor of phosphate transport derived from oncogenic osteomalacia-causing tumors. *J Clin Endocrinol Metab* 90:1012–1020, 2005. **Finalist, Endocrine Society/Pfizer Award for Excellence in Clinical Research**
60. Sabbagh Y, *Carpenter TO*, Demay M. Hypophosphatemia leads to rickets by impairing caspase-mediated apoptosis of hypertrophic chondrocytes. *PNAS USA* 102: 9637-9642, 2005.
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62. Klein GL, Fitzpatrick LA, Langman CB, Beck TJ, *Carpenter TO*, Gilsanz V, Holm IA, Leonard MB, Specker BL. The state of pediatric bone: summary of the ASBMR pediatric bone initiative. *J Bone Miner Res* 20:2075-2081, 2005.
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64. Kelly TG, Shattuck TM, Reyes-Mugica M, Stewart AF, Simonds WF, Udelsman R, Arnold A, *Carpenter TO*. Surveillance for early detection of aggressive parathyroid disease: carcinoma and atypical adenoma in Familial Isolated Hyperparathyroidism associated with a germline *HRPT2* mutation. *J Bone Min Res* 21:1666-1671, 2006.

65. *Carpenter TO*, DeLucia MC, Zhang JH, Bejnerowicz G, Tartamella L, Dziura J, Petersen KF, Befroy D, Cohen D. A randomized, controlled study of effects of dietary magnesium oxide supplementation on bone mineral content in healthy girls. *J Clin Endocrinol Metab* 91:4866-4872, 2006.
66. Demay MB, Sabbagh Y, *Carpenter TO*. Calcium and vitamin D: What is known about the effects on growing bone. *Pediatrics* 119 (Suppl 2):S141-S144, 2007.
67. Cohen P, Rogol A, Howard CP, Bright GM, Kappelgaard A-M, Rosenfeld RG, *American Norditropin Study Group*. Insulin Growth Factor-based dosing of growth hormone therapy in children: a randomized, controlled study. *J Clin Endocrinol Metab* 92: 2480-2486, 2007.
68. Brownstein CA, Adler F, Nelson-Williams C, Iijima J, Imura A, Nabehsima Y, *Carpenter TO\**, Lifton RP\*. A translocation causing increased  $\alpha$ -Klotho level results in hypophosphatemic rickets and hyperparathyroidism. *PNAS USA*, 105:3455-3460, 2008. \*co-senior authors
69. Gordon CM, Bachrach LK, *Carpenter TO*, Crabtree N, El-Hajj Fuleihan G, Kutilek S, Lorenc RS, Tosi LL, Ward KA, Ward LM, Kalkwarf HJ. Dual energy X-ray absorptiometry interpretation and reporting in children and adolescents: the 2007 ISCD pediatric official positions. *J Clin Densitom* 11: 43-58, 2008.
70. Jaureguiberry G, *Carpenter TO*, Forman S, Jueppner H, Bergwitz C. A novel missense mutation in SLC34A3 that causes HHRH identifies threonine 137 as an important determinant of sodium-phosphate co-transport in NaPi-IIc. *Am J Physiol* 295: F371-F379, 2008.
71. Boskey A, Frank A, Fujimoto Y, Spevak L, Verdelis K, Ellis B, Philbrick W, *Carpenter T*. The PHEX transgene corrects mineralization defects in 9-month-old hypophosphatemic mice. *Calcif Tiss Int* 84: 126-137, 2009.
72. Liang G, Katz LD, Insogna KL, *Carpenter TO*, Macica CM. Survey of the enthesopathy of X-linked hypophosphatemia and its characterization in Hyp mice. *Calcif Tiss Int* 85:235-46, 2009.
73. Shenoy A, Esquibies AE, Dunbar N, Bishop MK, Reyes-Mugica M, Langston C, Deladoey J, Abu-Khudir R, *Carpenter TO*, Bazzi-Asaad A. A novel presentation of diffuse lung disease secondary to congenital hypothyroidism. *J Pediatr* 155:593-595, 2009.
74. Brownstein C, Zhang J, Stillman A, Ellis B, Troiano N, Adams DJ, Gundberg CM, Lifton RP\*, *Carpenter TO\**. Increased bone volume and correction of HYP mouse hypophosphatemia in the Klotho/HYP mouse. *Endocrinology* 151: 492-501, 2010. \*co-senior authors
75. Xiao L, Naganawa T, Lorenzo J, *Carpenter TO*, Coffin JD, Hurley MM. Nuclear isoforms of fibroblast growth factor 2 are novel inducers of hypophosphatemia via modulation of FGF23 and Klotho. *J Biol Chem* 285:2843-2846, 2010.
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77. Suchy FJ, Brannon PM, *Carpenter TO*, Fernandez JR, Gilsanz V, Gould JB, Hall K, Hui SL, Lupton J, Mennella J, Miller N, Osganian SK, Sellmeyer DE, Wolf MA. National Institutes of Health Consensus Development Conference: Lactose intolerance and health. *Ann Int Med* 152:792-796, 2010.
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