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CURRICULUM VITAE – MICHAEL TERRENCE COLLINS

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Education

1975-81 Music Performance, Catholic University, Washington, D.C.
1985-87 B.G.S., University of Maryland at College Park, College Park, MD
1987-88 Post baccalaureate training, University of Maryland at College Park,
College Park, MD
1988-92 M.D., University of Maryland at Baltimore, Baltimore, MD

Post-Doctoral Training

1992-93 Intern, Internal Medicine, University of Maryland, Baltimore, MD
1993-95 Resident, Internal Medicine, University of Maryland, Baltimore, MD
1996 Chief Resident, Internal Medicine, University of Maryland,
Baltimore, MD
1995-98 Fellowship, Endocrinology and Metabolism, Developmental
Endocrinology Branch, National Institutes of Health, Bethesda, MD

Employment

2006-date Tenure Track Investigator, Chief, Skeletal Clinical Studies Unit,
Craniofacial and Skeletal Diseases Branch, National Institute of
Dental and Craniofacial Research, National Institutes of Health,
Bethesda, MD
1999-2006 Staff Clinician, Craniofacial and Skeletal Diseases Branch, National
Institute of Dental and Craniofacial Research, National Institutes of
Health, Bethesda, MD
1998-1999 Clinical Fellow, Craniofacial and Skeletal Diseases Branch,
National Institute of Dental and Craniofacial Research, National
Institutes of Health, Bethesda, MD
1988-1990 Technician, Laboratory of Neuroimmunopathology, Dr. Moon Shin,
University of Maryland Medical School, Baltimore, MD
1986-88 Biologist, Clinical Psychobiology Branch, National Institute of
Mental Health, National Institutes of Health, Bethesda, MD

Honors and Awards

1977-81	Music Performance Scholarships, Catholic University Wind Ensemble
1990	MSTP Exchange Fellow Erasmus University, Rotterdam, Netherlands
1990	First Place, Oral Presentations, Medical Student Research Day, University of Maryland Medical School
1992	Rudolf Virchow Prize for Research in Pathology
1992	Leslie B. Barnett Research Fellow in Neurology Outstanding Senior Resident Award for Excellence in Teaching
1998	Scientific Director's Travel Award, NIDCR
2001	"MAGIC Kiss" Award, MAGIC Foundation
2006	Constellation Award, Fibrous Dysplasia Foundation

Editorial Responsibilities

Guest Editor, Pediatric Endocrine Reviews
 Reviewer, Lancet
 Reviewer, Journal of Cell Biology
 Reviewer, Journal of Bone and Mineral Metabolism
 Reviewer, Journal of Clinical Endocrinology and Metabolism
 Reviewer, Endocrinology
 Reviewer, *Acta Paediatrica*
 Reviewer, Post Graduate Medicine
 Reviewer, The Journal of Pediatrics
 Reviewer, Expert Review of Endocrinology and Metabolism
 Reviewer, Bone
 Reviewer, American Journal of Medical Genetics
 Reviewer, British Journal of Ophthalmology
 Reviewer, Anatomical Review
 Reviewer, Endocrine Society Meeting Abstracts
 Reviewer, American Society of Bone and Mineral Research Meeting Abstracts
 Reviewer, International Society of Bone and Mineral Research Meeting Abstracts

Invited Presentations

1. National Chief Residents Conference, Tucson, AZ, July, 1996. "Should men and women's cardiovascular risk factors be treated the same?"
2. Endocrine Grand Rounds, University of Maryland, Baltimore, MD, March, 1997. "The calcium-sensing receptor."
3. Medical Grand Rounds, University of Maryland, Baltimore, MD, June, 1997. "Primary hyperparathyroidism."
4. Endocrine Grand Rounds, University of Maryland, Baltimore, MD, March, 1998. "Osteoporosis in men."

5. Baltimore Bone Club/Maryland Endocrine Society, Baltimore, MD, March, 1998. "Osteoporosis in men."
6. Endocrinology Update for the Practicing Physician, University of Maryland, Baltimore, MD, October 1998. "Male hypogonadism."
7. Medical Grand Rounds, University of Maryland, Baltimore, MD, March, 1999. "Osteoporosis in men."
8. Endocrine Grand Rounds, National Institutes of Health, Bethesda, MD, July, 1999. "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
9. MAGIC Foundation Annual Convention, Chicago, IL, July 1999, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
10. Symposium on Gs alpha Diseases, Annual Meeting of the Endocrine Society, Toronto, Canada, June, 2000. "Clinical manifestations of activating Gs α mutations."
11. MAGIC Foundation Annual Convention, Chicago, IL, July 2000, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
12. Seminar, Department of Experimental Medicine, University of Rome 'La Sapienza,' Italy, December, 2000. "The McCune-Albright syndrome: clarification of the clinical spectrum."
13. MAGIC Foundation Annual Convention, Chicago, IL, July 2001, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
14. Endocrine Grand Rounds, Johns Hopkins University, Baltimore, Maryland, October, 2001. "Fibrous dysplasia as a model of a bone cell disease."
15. Endocrine Grand Rounds, University of Maryland, Baltimore, Maryland, January 2002. "An osteocentric view of McCune-Albright syndrome; the endocrinologists dream (nightmare)."
16. Endocrine Grand Rounds, Columbia University New York, New York, April, 2002. "An osteocentric view of McCune-Albright syndrome."
17. MAGIC Foundation Annual Convention, Chicago, IL, July 2002, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
18. Meet the Professor, Annual Meeting of the Endocrine Society, Philadelphia, PA, June, 2003 "McCune-Albright Syndrome and Fibrous Dysplasia."
19. Endocrine Grand Rounds, Creighton University, Omaha, Nebraska, June, 2003: "McCune-Albright Syndrome: The Endocrinologists Dream (Nightmare)"
20. Endocrine Grand Rounds, Indiana University, Indianapolis, Indiana, July, 2003: "McCune-Albright Syndrome: The Endocrinologists Dream (Nightmare)"
21. MAGIC Foundation Annual Convention, Chicago, IL, July 2003, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
22. Lawson Wilkins Pediatric Endocrine Society Annual Meeting, San Francisco, CA, May, 2004: Chairperson, "Clinical Review: Growth Hormone Issues in Pediatric Patients"
23. Oral and Maxillofacial Surgery Grand Rounds, University of California San Francisco, San Francisco, CA, May 2004: "'Fibrous Dysplasia and the McCune-Albright Syndrome and it's Implications for Oral Maxillofacial Surgery'"

24. Oral Presentation, Endocrine Society Annual Meeting, New Orleans, LA, June, 2004: "Serum FGF-23 is Elevated in Patients with Hyperphosphatemia."
25. MAGIC Foundation Annual Convention, Chicago, IL, July 2004, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
26. Endocrine Society Board Review Course, Instructor, Baltimore, MD, September, 2004, "Bone and Mineral Metabolism."
27. NIH Research Festival, Bethesda, MD, September, 2004, Symposium: cAMP-dependent Protein Kinase Signaling and Human Disease, "McCune-Albright Syndrome, GNAS Mutations and Carney Complex."
28. University of Maryland, Endocrine Grand Rounds, Baltimore, MD, December, 2004, "New Insights into Vitamin D and Phosphorus Metabolism."
29. Endocrine Scholar Lecture, University of Connecticut, Hartford, CT, February, 2005, "New Insights into Vitamin D and Phosphorus Metabolism: Fibrous dysplasia, phosphatonin, and FGF-23."
30. Washington Hospital Center, Endocrine Grand Rounds, Washington, D.C., April, 2005, "New Insights into Vitamin D and Phosphorus Metabolism: Fibrous dysplasia, phosphatonin, and FGF-23."
31. Visiting Professor in Endocrinology, University of Virginia, Charlottesville, VA, June, 2005, "New Insights into Vitamin D and Phosphorus Metabolism."
32. MAGIC Foundation Annual Convention, Chicago, IL, July 2005, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
33. First Regional Meeting of the Fibrous Dysplasia Foundation, New York City, NY, November 2005, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
34. Paget's Disease of Bone/Fibrous Dysplasia: Advances and Challenges, Fort Lauderdale, FL, January 2006, "Spectrum and Natural History of Fibrous Dysplasia of Bone."
35. Washington, D.C Dermatologic Society, May, 2006 "McCune-Albright Syndrome: Clinical Implications of the Molecular and Genetic Pathophysiology"
36. MAGIC Foundation Annual Convention Chicago, IL, July 2006, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
37. Fibrous Dysplasia Foundation Annual Meeting, Santa Monica, CA, August, 2006. "Update on Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
38. Annual Meeting of the American Society of Bone and Mineral Research, Philadelphia, PA September, 2006. Co-Chair Session on "Other disorders of bone and mineral metabolism II."
39. NIH Clinical Center Grand Rounds, Bethesda, MD, January, 2007. "Fibrous dysplasia of bone: natural history, treatment, and insights into mineral metabolism."
40. University of Vermont Bone Center, Visiting Professor, Burlington, VT, April, 2007. "Fibroblast growth factor-23: a bone hormone that regulates mineral metabolism."

41. Georgetown University, Pediatric Grand Rounds, Washington, D.C., June, 2007. "Fibrous dysplasia of bone, McCune-Albright syndrome: a rare disease that's provided many general insights."
42. Hypoparathyroid Association Annual Meeting, Arlington, VA, June 2007. "Hypoparathyroidism affects on bones."
43. MAGIC Foundation Annual Convention Chicago, IL, July 2007, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
44. Oral Presentation, American Society of Bone and Mineral Research, Pediatric Bone and Mineral Working Group, Honolulu, Hawaii, September 2007, "Bone mass in adults and children with hypoparathyroidism."
45. Fibrous Dysplasia Foundation Annual Meeting, Indianapolis, IN, October, 2007. "Update on Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
46. University of Maryland, Endocrine Grand Rounds, Baltimore, MD, February, 2008. "FGF23, a new bone hormone that regulates mineral metabolism."
47. Washington Hospital Center Internal Medicine Grand Rounds, May, 2008. "The diagnosis and treatment of osteoporosis: a large dose of clinical judgment."
48. Annual Meeting of the Hypoparathyroidism Association, Bethesda, MD, June 2008, "Hypoparathyroidism: Affects on bones – what we do and don't know."
49. Ludwig Boltzman Institute of Osteology, Vienna, Austria, Visiting Professor, June, 2008
50. MAGIC Foundation Annual Convention Chicago, IL, July 2008, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
51. Yale Center for X-linked Hypophosphatemia, Yale University, New Haven, Connecticut, Guest Speaker Advisory Board Meeting of the YC-XLH, "FGF23: New Insights into action and regulation; implications for treatment," and Endocrine Grand Rounds, October, 2008. "McCune-Albright syndrome: how a zebra has taught us many lessons about horses."
52. Rare Bone Coalition Meeting, National Institutes of Health, Bethesda, MD, October, 2008, Group Leader and Lecturer, Fibrous Dysplasia.
53. Fibrous Dysplasia Foundation Annual Meeting, Bethesda, MD, October, 2008. "Update on Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
54. Demystifying Medicine, NIH, March, 2009. "Fibrous Dysplasia of Bone and McCune-Albright Syndrome."
55. NIH & FDA Glycosciences Research Day, NIH, May, 2009. "GALNT3 in Human diseases,"
56. Washington Bone Club, Bethesda, MD, June, 2009. "Fibrous dysplasia, FGF23, and osteomalacic bone disorders,"
57. MAGIC Foundation Annual Convention Chicago, IL, July 2009, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
58. FAES Endocrinology Board Review Faculty, Bethesda, MD, August, 2009. "Osteoporosis," and "Bone Disorders other than osteoporosis."
59. Visiting Professor in Endocrinology, Vanderbilt University, Nashville, TN, September, 2009.

60. Lecturer, European Union Instructional Course in Pediatric Orthopaedics, Various topics, Tel Aviv, Israel, December, 2009
61. Parathyroids 2010, Invited speaker, Pisa, Italy, February, 2010. "Use of PTH in hypoparathyroidism,"
62. Massachusetts General Hospital, Medical Grand Rounds, Clinicopathologic Conference, Discussant, Boston, MA, June, 2010
63. Endocrine Society, Invited seminar speaker, Gs alpha in bone, San Diego, CA, June, 2010.
64. MAGIC Foundation Annual Convention Chicago, IL, July 2010, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
65. FAES Endocrinology Board Review Faculty, Bethesda, MD, August, 2010. "Osteoporosis," and "Bone Disorders other than osteoporosis."
66. Endocrine Grand Rounds, National Institutes of Health, "Phosphate diabetes and rickets: the role of FGF23 in mineral metabolism," Bethesda, MD, October, 2010.
67. Federal Working Group on Bone Diseases, NIH, Bethesda, MD, March, 2011. "Update on FGF23 in Bone and Mineral Metabolism."
68. University of Pittsburgh Endocrine Grand Rounds, Pittsburgh, PA, March, 2011. "Phosphate diabetes and rickets: the role of FGF23 in mineral metabolism."
69. Fifth International Hypoparathyroidism Patient Conference, Bethesda, MD, June, 2011. "New and future therapies for treating hypoparathyroidism"
70. PDE 2011: Second International Workshop on cyclic AMP, protein kinase and phosphodiesterases, Bethesda, MD, June, 2011. "Fibrous dysplasia: a model for the study of cAMP in bone."
71. MAGIC Foundation Annual Convention Chicago, IL, July 2011, "Polyostotic fibrous dysplasia of bone and McCune-Albright syndrome."
72. FAES Endocrinology Board Review Faculty, Bethesda, MD, September, 2011. "Osteoporosis" and "Bone Disorders other than osteoporosis."
73. FDA: CDRH/CBER/CDER Bone Seminar Series, Silver Spring, MD October, 2011, "FGF23: From Phosphate Diabetes to Drug Targets"
74. Hospital for Special Surgery, New York, NY, Guest Lecturer, December, 2011, "The central role of FGF23 in skeletal mineral metabolism."
75. Pediatric Endocrine Society of Texas, Oklahoma, Louisiana, and Arkansas, Houston, TX, January, 2012, "Update on Fibrous Dysplasia and McCune-Albright Syndrome"
76. Canadian Pediatric Endocrine Group, Winnipeg, Manitoba, Canada, February, 2012, "FGF-23 and its role in pediatric mineral metabolism."
77. University of Miami Nephrology Grand Rounds, Miami, FL, February, 2012, "FGF23 regulation, processing, and action; implications for current and future treatment"
78. George Washington University
79. Johns Hopkins University
80. Hypoparathyroidism Association
81. Glycoscience Day

Extramural Activities

2003-date	Medical Advisory Committee, The MAGIC Foundation
2004-date	Chair, Medical Advisory Board, Fibrous Dysplasia Foundation
2008	FDA Drug Advisory Committee for Reproductive Health Drugs; New Drug Application Lasofoxifene (Fablyn)
2008	Reviewer, National Cancer Institute, Cancer Prevention and Control Review Committee, A Substudy of the TEXT trial to evaluate serial bone markers for bone remodeling, serial growth factors, and bone mineral density
2009	FDA Drug Advisory Committee for Reproductive Health Drugs; New Drug Application Denosumab
2010	Grant reviewer The French National Research Agency (l'Agence Nationale de la Recherche)
2010-date	Advisory Board Yale Center for X-Linked Hypophosphatemia
2010	Chair, Organizing Committee International Meeting on Fibrous Dysplasia/McCune-Albright Syndrome and Cherubism to be held at NIH, October, 2010
2011	Reviewer, NIAMS Study Section, Special Emphasis Panel (SEP) for applications proposing research related to clinical trials.
2011	FDA Joint Advisory Committee for Reproductive Health Drugs and Drug Safety and Risk Management Advisory Committee; Review of the Risks and Benefits of Long-Term Bisphosphonate use for Prevention and Treatment of Osteoporosis

Membership in Professional Societies

Endocrine Society
 American Society of Bone and Mineral Research
 International Society of Bone Morphometry

NIH Intramural Activities (outside the NIDCR DIR)

1998-1999	Fellow Liaison, Interinstitute Endocrine Training Program
1998-date	Member, Hard Tissue Disorders Special Interest Group
1999-date	Faculty and Program Planning Committee, Interinstitute Endocrine Training Program, NIH
2000-date	Attending, Endocrine Consult Service (one month per year)
2000-date	Attending, Metabolic Diseases Branch, NIDDK (one month per year)
2004	Search Committee, Staff Scientist, Genetic Diseases Branch, NICHD
2004-date	Mentor, Clinical Research Training Program
2007	Advisory Panel, Proteus Syndrome, NIH, Bethesda, MD
2008-date	Senior Consultant, NIH Undiagnosed Diseases Program
2008-date	Tutor and Faculty, Clinical Research Training Program

2010-date Organizer Interinstitute Endocrine Training Program Research Oversight and Career Development Committee

NIDCR DIR Intramural Activities

1999-2009 Member, Institutional Review Board, NIDCR
2007-date NIDCR DIR Administrative Liaison Committee

Clinical Protocols

1. 91-DK-0085 Associate Investigator
"Studies of Hyperparathyroidism and Related Disorders"
2. 93-DK-0127 Associate Investigator
"Family Studies in Metabolic Diseases and Mineral Metabolism"
3. 94-D-0188 Associate Investigator
"Bone regeneration with marrow stromal cells"
4. 98-D-0145 Principal Investigator,
"Screening and natural history of patients with polyostotic fibrous dysplasia and the McCune-Albright Syndrome"
5. 98-D-0146 Associate Investigator
Medically Advisory Investigator
"A randomized, placebo-controlled trial of alendronate in the treatment of polyostotic fibrous dysplasia and the McCune-Albright Syndrome"
6. 00-I-0159 Associate Investigator
"Natural history, management, and genetics of hyperimmunoglobulin E recurrent infection (Jobs) syndrome"
7. 01-D-0184 Principal Investigator
"Evaluation and treatment of skeletal diseases."
8. 00-D-0183 Lead Associate Investigator
"A pilot study of the effects of the aromatase inhibitor letrozole on pubertal progression and indices of bone turnover in girls with precocious puberty and the McCune-Albright syndrome"
9. 01-D-0184 Principle Investigator
"Evaluation and Treatment of Bone and Mineral Disorders"
10. 01-D-0197 Principle Investigator
"A Study of the Effects of Pegvisomant on Growth Hormone Excess in McCune-Albright Syndrome"
11. 03-DK-0098 Associate Investigator
"Study of Thyrotropin Releasing hormone in Patients with Thyroid or Pituitary Abnormalities"
12. 04-CC-0046 Associate Investigator
"Citrate Effects and Bone Density in Long-Term Apheresis Donors"
13. 05-D-0050 Principle Investigator
"Selective Venous Catheterization for the Localization of Phosphaturic Mesenchymal Tumors"
14. 06-D-0188 Principle Investigator
"Physiologic Regulation of FGF23"

- 15.07-D-0016 Lead Associate Investigator
 "Effects of PTH Replacement on Bone in Hypoparathyroidism"
 16.09-D-N046 Associate Investigator
 "Procurement of Normal Bone and Abnormal Bone, Dermis and Adipose
 Tissue for Establishment of Cell Culture and Tissue Analyses"

Animal Protocols

- 08-484 Principal Investigator
 "Transplantation of rare human connective tissue tumors into
 immunocompromised mice"
 10-579 Co-investigator
 "Parathyroid hormone gene transfer to rat salivary gland for the
 correction of hypoparathyroidism"

Material Transfer Agreements

1. Bone biopsy specimens from Protocol 07-D-0016 from NIH to Drs. David Dempster (Columbia University, New York, NY) and Klaus Klaushofer (Ludwig Boltzmann Institute, Vienna, Austria)
2. Phosphaturic tumors from protocol 01-D-0184 to Dr. Michael Mannstadt (Harvard University, Boston, MA)

Bibliography

Peer-Reviewed Research Articles

1. Lee, C, **M.T. Collins**, P. Vanguri, M.L. Shin. "Glutamate differentially inhibits the expression of class II MHC antigens on astrocytes and microglia." **The Journal of Immunology**, Vol. 148, No.11, 3391-7. June 1, 1992
2. Hussain, C. A. Zimmerman, J.A. Boose, J. Froelich, A. Richardson, R.S. Horowitz, **M.T. Collins**, R.W. Lash. "Large-scale synthesis of recombinant human thyrotropin using methotrexate amplification: chromatographic, immunologic, and biologic characterization." **J Clin Endo and Metab**, 81(3), 1184-1188, March, 1996.
3. **Collins, M.T.**, M.C. Skarulis, J.P. Bilezikian, S.J. Silverberg, A.M. Spiegel, S.J. Marx. Treatment of hypercalcemia secondary to parathyroid carcinoma with a novel calcimimetic agent, **J Clin Endo and Metab** 83(4) 1083-88, 1998.
4. Bianco, P, M. Riminucci, A. Majolagbe, S.A. Kuznetsov, **M.T. Collins**, M.H. Mankani, A. Corsi, H.G. Bone, S. Wientroub, A.M. Spiegel, L.W. Fisher, P.G. Robey, "Mutations of the GNAS1 Gene, Stromal Cell Dysfunction, and Osteomalacic Changes in Non-McCune-Albright Fibrous Dysplasia of Bone." **J Bone Miner Res** 2000; 15:120-128
5. **Collins, M.T.**, A.T. Remaley, G. Csako, F. Pucino, M.C. Skarulis, J.E. Balow, and N.J. Sarlis. Increased Levothyroxine Requirements Presenting as

- 'Inappropriate' TSH Secretion Syndrome in a Patient with Nephrotic Syndrome. **J. Endocrinol. Invest**; 2000;23:383-392.
6. **Collins, M.T.**, C. Chebli, J. Jones, H. Kushner, M. Consugar, P. Rinaldo, S. Wientroub, P. Bianco, P. G. Robey, Renal phosphate wasting in fibrous dysplasia of bone is part of a generalized renal tubular dysfunction similar to that seen in tumor-induced osteomalacia, **J Bone Miner Res** 2001;16:806-813.
 7. **Collins, M.T.**, M Riminucci, A Corsi, M. D. Murphey, S Wientroub, P Bianco, P. G. Robey Angiomatosis of bone with localized mineralization defect, **J Bone Miner Res**, 2001; 16(10),
 8. Riminucci, M., **M.T. Collins**, A. Corsi, M.D. Murphey, S Wientroub, P.G. Robey, P Bianco, Gnatho-diaphyseal dysplasia: A syndrome of fibro-osseous lesions of craniognathic bones, bone fragility, long bone bowing, **J Bone and Miner Res**, 2001;16:1710-1718.
 9. Riminucci, M., **M.T. Collins**, A. Corsi, R. Lala, P.G. Robey, P Bianco, An R201 Activating Mutation of the GNAS1 (Gs α) gene in a corticotroph adenoma, **J Clin Pathol: Mol Pathol**, 2002;55:58-60.
 10. Corsi, A., M Riminucci, V Petrozza, **M T Collins**, M E Natale., ACancrini Jr, P Bianco, Incidentally detected giant oncocytoma arising in retroperitoneal heterotopic adrenal tissue, **Arch Pathol Lab Med** 2002;126:1118-1122.
 11. Akintoye, S.O., C Chebli, S Booher, P Feuillan, H Kushner, D LeRoith, N Cherman, P Bianco, S Wientroub, P G Robey, **M T Collins**, Characterization of *gsp*-mediated growth hormone excess in the context of McCune-Albright syndrome, **J Clin Endocrinol Metab** 2002;87(11):5104-12
 12. Lee, J.S., E. Fitzgibbon, J.A. Butman, C.R. Dufresne, H. Kushner, S. Wientroub, P.G. Robey, **M.T. Collins**, Normal vision despite optic canal narrowing by fibrous dysplasia of bone, **N Engl J Med** 2002;347:1680-6.
 13. Ziran, N., S. Hill, M.E. Wright, J., Kovacs, P.G. Robey, S. Wientroub, **M.T. Collins**, "Ribbing disease: radiographic and biochemical characterization, lack of response to pamidronate, **J Skeletal Radiology** 2002;31:715-9.
 14. Brennan MT, Sankar V, Leakan RA, Grisius MM, **Collins MT**, Fox PC, Baum BJ, Pillemer SR, Sex Steroid Hormones in Primary Sjcapital ZHE, Cyrillicgren's Syndrome, **J Rheumatol** 2003; 30(6):1267-71
 15. Slavotinek, A.M., **M. T. Collins**, M. Muenke, Non-syndromal hemihyperplasia in a male and his mother, **Am J Med Genetics** 2003; 121A:47-51.
 16. Akintoye, S.O., J. Lee, T. Feimster, S. Booher, J. Brahim, A. Kingman, M. Riminucci, P. G. Robey, **M.T. Collins**, Dental characteristics in fibrous dysplasia and McCune-Albright syndrome, **Oral Surg, Oral Med, Oral Pathol, Oral Radiol, and Endod** 2003;96:275-82.
 17. Corsi, A., **M.T.Collins**, M. Riminucci, P.G. Howell, A. Boyde, P.G. Robey, P. Bianco, Osteomalacic and hyperparathyroid changes in fibrous dysplasia of bone: core biopsy studies and clinical correlations, **J Bone and Miner Res** 2003; 18(7):1235-46

18. Leet, A.I., E. Magur, J. S. Lee, S. Weintraub, P. G. Robey, **M. T. Collins**, Fibrous Dysplasia in the Spine: Incidence of Lesions and Association with Scoliosis, **J Bone and Joint Surg** 2004; 86-A (3):531-537.
19. **Collins, M.T.**, N. J. Sarlis, M. J. Merino, J. Monroe, S. E. Crawford, J. A. Krakoff, L. Guthrie, S. Bonat, P. G. Robey, A. Shenker, Thyroid carcinoma in the McCune-Albright syndrome: Contributory role of activating G_s mutations, **J Clin Endo and Metab.** 2003; 88(9):4413-4417.
20. Riminucci, M., **M. T. Collins**, N. S. Fedarko, N. Cherman, A. Corsi, K. E. White, S. Waguespack, A. Gupta T. Hannon, M. J. Econs, P. Bianco, P. G. Robey, Production and circulation of FGF-23 in Fibrous dysplasia of bone: relationship to renal phosphate wasting, **J Clin Invest.** 2003;112:683-692.
21. Akintoye, S.O., L L Otis, J C Atkinson, J Brahim, H Kusner, P G Robey, **M T Collins**, Analysis of variable panoramic radiographic characteristics of maxillo-mandibular fibrous dysplasia in McCune-Albright syndrome, **Oral Diseases** 2004 10, 36-43
22. Leet, A.I., C. Chebli, H. Kushner, P.G. Robey, P. Bianco, S. Wientraub, **M.T. Collins**, Fracture incidence in polyostotic fibrous dysplasia and the McCune-Albright's syndrome, **J Bone and Miner Res** 2004 19(4), 571-7
23. Karadag, A., M. Riminucci, P. Bianco, N. Cherman, S.A. Kuznetsov, N. Nguyen, M.T. Collins, P.G. Robey, L.W. Fisher, A Novel technique based on a PNA hybridization probe and FRET principle for quantification of mutant genotype in fibrous dysplasia/McCune-Albright syndrome, **Nucleic Acids Research** 2004 32(7).
24. Jain, A., N.S. Fedarko, **M.T. Collins**, R. Gelman, M.A. Ankrom, L.W. Fisher Serum levels of matrix extracellular phosphoglycoprotein (MEPE) in normal humans correlate with serum phosphorus, parathyroid hormone and bone mineral density **J Clin Endo and Metab** 2004 89(8) 4158-4161.
25. Gupta, A., K.Winer, M.J.Econs, S. J. Marx, **M.T.Collins**, FGF-23 is elevated by chronic hyperphosphatemia **J Clin Endo and Metab** 2004 89(9), 4489-4492.
26. **Collins , M. T** , H. Kushner, J. C. Reynolds, C. Chebli, M. H. Kelly, A. Gupta, B. Brillante, A.I. Leet, M. Riminucci, P.G. Robey, P. Bianco, S. Wientraub, C. C. Chen, An Instrument to measure skeletal burden and predict functional outcome in fibrous dysplasia of bone **J Bone and Miner Res** 2005 20(2), 219-226.
27. Lee, J.S., M. Tartaglia, B. Gelb, K. Fridrich, E. Reichenberger, S. Sachs, C. Stratakis, M. Muenke, P. G. Robey, **M. T. Collins**, A. Slavotinek. Phenotypic and genotypic characterization of Noonan-like/multiple giant cell lesion syndrome. **J Med Genet** 2005 42(2):e11.
28. Kelly, M.H., B. Brillante, H. Kushner, P. G. Robey, **M. T. Collins**, Physical function is impaired but quality of life preserved in patients with fibrous dysplasia, 2005 **Bone**, 37(3) 388-94
29. **Collins, M.T.**, J. Lindsay, A. Jain, M.H. Kelly, C. Cutler, L.S. Weinstein, J. Liu, N. S. Fedarko, K. K. Winer, Fibroblast growth factor-23 is regulated by 1,25-dihydroxyvitamin-D, **J Bone and Miner Res**, 20(11) 2005

30. Freedman, R.J., V. Malkovska, D. LeRoith, **M.T. Collins**, Hodgkin lymphoma in temporal association with growth hormone replacement, **Endocrine Journal** 52(5), 2005
31. Akintoye, S.O., T. Lam, S. Shi, J. Brahim, **M.T. Collins**, P.G. Robey, Skeletal Site-Specific Characterization of Orofacial and Iliac Crest Human Bone Marrow Stromal Cells in Same Individuals, **Bone**, 38(6):758-68, 2006
32. Leet, A.I., S. Wientroub, H. Kushner, B. Brillante, M. H. Kelly, P. G. Robey, **M. T. Collins**, The correlation of specific orthopedic features of polyostotic fibrous dysplasia with functional outcome scores in children, **J Bone and Joint Surg** 88(4):818-23, 2006
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