Maureen J. Devlin

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EDUCATION

2007	PhD	Anthropology	Harvard University
2004	MA	Anthropology	Harvard University
2000	MA	Anthropology	George Washington University
1996	AB *cum laude*	Anthropology	Harvard University

APPOINTMENTS

2012- Assistant Professor of Anthropology
University of Michigan, Ann Arbor, MI

2011-2012 Instructor in Orthopedic Surgery
Harvard Medical School, Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, Boston, MA

2007-2010 Postdoctoral fellow
Harvard Medical School, Center for Advanced Orthopedic Studies, Beth Israel Deaconess Medical Center, Boston, MA

2003-2007 Assistant Tutor, Biological Anthropology/Human Evolutionary Biology
Department of Anthropology, Harvard University, Cambridge, MA

GRANTS, FELLOWSHIPS, AND AWARDS

2009-2012 Co-Investigator: *Effect of perinatal diet on developmental programming of the skeleton* (NIAMS 1RC1AR058389-01, $471,749)

2010-2012 Individual National Research Service Award, *Role of perinatal diet in developmental programming of skeletal strength* (NICHD 1F32HD060419-01), sponsored by Mary Bouxsein and Clifford Rosen

2009-2010 Institutional National Research Service Award (5T32DK007028-35, PI: J. Avruch, Massachusetts General Hospital)

2009 Young Investigator Award, American Society of Bone and Mineral Research, Bone, Brain and Fat Topical Meeting

2006-2007 Dissertation Fellowship, Harvard University

2004-2007 NSF Doctoral Dissertation Improvement Grant, *The effect of interactions between estradiol and mechanical loading on human longitudinal and periosteal bone growth*, (BCS-0434894, $9,815), sponsor Daniel E. Lieberman

2006 Cora du Bois Fellowship, Harvard University

2005-2006 GSAS Fellowship, Harvard University

2004 Juan Comas Student Prize, American Association of Physical Anthropology

2003-2005 Certificates of Distinction in Teaching, Harvard University

2003-2004 Chapman Fellowship, Harvard University

PUBLICATIONS

Peer-reviewed manuscripts

Devlin MJ. (in press) The "skinny" on brown fat, obesity and bone. 2015 *Yearbook of Physical Anthropology.*

Devlin MJ, Van Vliet M, Louis L, Conlon C, and Bouxsein ML. (2014) Early onset Type 2 diabetes impairs skeletal acquisition in the TALLYHO/JngJ mouse. *Endocrinology* 155(10):3806-16. Epub 2014 Jul 22. PMID: 25051433 [PubMed - in process].

Devlin MJ, Rosen CJ. (2014) The bone—fat interface: basic and clinical implications of marrow adiposity. *The Lancet – Diabetes and Endocrinology*. Early Online Publication, 19 February 2014. PMCID: PMC4138282 [Available on 2015/8/19].

Kuo S, DeSilva JM, **Devlin MJ,** McDonald G, Morgan EF. (2013) The effect of the Achilles tendon on trabecular structure in the primate calcaneus. *Anatomical Record (Hoboken).* 296(10):1509-17. PMID: 23821323.

Devlin MJ. (2013) Bone marrow composition, diabetes, and fracture risk: more bad news for saturated fat. *Journal of Bone and Mineral Research* 28(8):1718-20. PMID: 23794182.

Devlin MJ, Grasemann C, Cloutier AM, Louis L, Palmert M, Bouxsein ML. (2013) Maternal high fat diet induces developmental programming of bone architecture. *Journal of Endocrinology* 217:69-81. PMCID: PMC3792707.

Grasemann C, **Devlin MJ**, Rzeczkowska PA, Herrmann R, Horsthemke B, Klein-Hitpass L, Hauffa BP, Bouxsein ML, Palmert MR. (2012) Parental Diabetes: The Akita Mouse as a Model of the Effects of Maternal and Paternal Hyperglycemia in Wildtype Offspring. *PLoS ONE* 7(11): e50210. PMCID: PMC3509145.

DeSilva J, **Devlin MJ.** (2012) A comparative study of the internal bony architecture of the talus in humans, non-human primates, and *Australopithecus*. *Journal of Human Evolution* 63(3):536-51. PMID: 22840715.

Devlin MJ and Bouxsein ML. (2012) Influence of pre- and peri-natal nutrition on skeletal acquisition and maintenance. *Bone* 50(2):444-51. Epub 2011 Jun 24. PMID: 21723972.

Devlin MJ. (2011) Why does starvation make bones fat? *American Journal of Human Biology* 23(5):577-585 (cover). PMCID: PMC3169094.

Devlin MJ. (2011) Estrogen, exercise, and the skeleton. *Evolutionary Anthropology* 20:54–61. PMID: 22034104.

Devlin MJ, Cloutier AM, Thomas N, Panus DA, Lotinun S, Pinz I, Preda M, Baron R, Rosen CJ, and Bouxsein ML. (2010) Caloric restriction leads to high marrow adiposity and low bone mass in growing mice. *Journal of Bone and Mineral Research* 25(9): 2078-2088. Epub 2010 Mar 12. PMCID: PMC3127399.

Devlin MJ, Stetter CM, Lin HM, Beck TJ, Legro RS, Petit MA, Lieberman DE, Lloyd T. (2010) Peripubertal estrogen levels and physical activity affect femur geometry in young adult women. *Osteoporosis International* 21(4): 609-17. Epub 2009 Jul 3. PMCID: PMC3230251.

Kawai M, **Devlin MJ,** Rosen C. (2009) Fat Targets for Skeletal Health. *Nature Reviews Rheumatology*. 5(7):365-72. Epub 2009 May 26. PMCID: PMC3661210.

Bouxsein ML, **Devlin MJ**, Glatt V, Dhillon H, Pierroz DD, Ferrari SL. (2009) Mice lacking ß-adrenergic receptors have increased bone mass, but are not protected from deleterious skeletal effects of ovariectomy. *Endocrinology*. 150(1):144-52. PMCID: PMC2630907.

Devlin MJ, Lieberman DE. (2007) Variation in estradiol level affects cortical bone growth in response to mechanical loading in sheep. *Journal of Experimental Biology* 210:602-613. PMID: 17267646.

Pontzer H, Lieberman DE, Momin E, **Devlin MJ**, Polk JD, Hallgrimsson B, Cooper DM. (2006) Trabecular bone in the bird knee responds with high sensitivity to changes in load orientation. *Journal of Experimental Biology* 209(Pt 1):57-65. PMID: 16354778.

Lieberman DE, Krovitz GE, Yates FW, **Devlin MJ**, St. Claire M. (2004) Effects of food processing on masticatory strain and craniofacial growth in a retrognathic face. *Journal of Human Evolution* 46(6):655-77. PMID: 15183669.

Lieberman DE, **Devlin MJ**, Pearson OM. (2001) Articular surface area responses to mechanical loading: effects of exercise, age and skeletal location. *American Journal of Physical Anthropology* 116(4):266-277. PMID: 11745078.

Manuscripts in prep.

Devlin MJ, Van Vliet M, Brooks D, Louis L, Conlon C, and Bouxsein ML. Skeletal response to postnatal caloric restriction differs in male vs. female C57Bl/6J mice.

Devlin MJ, Conlon C, Van Vliet M, Louis L, Rosen C, and Bouxsein ML. Leptin replacement in caloric restriction blunts marrow adiposity but does not increase skeletal acquisition in female C57Bl/6J mice.

Devlin MJ, Louis L, Cloutier AM, Sprague S, and Bouxsein ML. Effects of high fat diet on trabecular and cortical bone microarchitecture in growing female FVB/J and C57Bl/6J mice.

Book Reviews

Devlin MJ. (2005) Review of *The skeleton: biochemical, genetic and molecular interactions in development and homeostasis,* Ed. Edward Massaro and John Rogers. *Trends in Endocrinology and Metabolism,* 16(1):4.

Devlin MJ. (2004) Review of *Human Growth and Development*, Ed. Noël Cameron. *Journal of Anatomy* 204(6):521-2.

Published abstracts

Devlin MJ, Van Vliet M, Louis L, Conlon C, and Bouxsein ML. (2014) Skeletal response to caloric restriction differs in male vs. female mice. *Journal of Bone and Mineral Research* 29(S1).

Devlin MJ, Conlon C, Van Vliet M, Louis L, and Bouxsein ML. (2014) Leptin blunts the starvation-induced increase in bone marrow adiposity. *American Journal of Physical Anthropology,* 152 (S58):105.

Devlin MJ, Conlon C, Van Vliet M, Louis L, Karim L, Rosen C, and Bouxsein ML. (2013) Leptin blunts the starvation-induced increase in bone marrow adiposity. *Journal of Bone and Mineral Research* 28(S1).

Devlin MJ, Conlon C, Van Vliet M, Louis L, and Bouxsein ML. (2013) Severely impaired skeletal acquisition in a mouse model of adolescent Type 2 diabetes. *American Journal of Physical Anthropology,* 150 (S56): 111-112.

Devlin MJ, Louis L, Conlon C, Van Vliet M, and Bouxsein ML. (2012) Maternal diet does not alter skeletal response to postnatal caloric restriction in female mice. *Journal of Bone and Mineral Research* 27(S1).

Devlin MJ, Van Vliet M, Conlon C, Louis L, Karim L, and Bouxsein ML. (2012) Early onset Type 2 diabetes impairs skeletal acquisition in the Tallyho mouse. *Journal of Bone and Mineral Research* 27(S1).

Devlin MJ, Louis L, Conlon C, Van Vliet M, and Bouxsein ML. (2012) Are you what your mom ate? A model for developmental programming of human osteoporosis and obesity. *American Journal of Physical Anthropology,* 147 (S54): 130.

Devlin MJ, Louis L, Conlon C, Cloutier AM, Van Vliet M, and Bouxsein ML. (2011) Interactions of maternal and postnatal diet alter skeletal acquisition in male and female mice: evidence for developmental programming of bone acquisition. *Journal of Bone and Mineral Research* 26(S1).

Devlin MJ, Grasemann C, Cloutier AM, Palmert M, Bouxsein ML. (2011) Maternal perinatal diet alters offspring bone architecture: evidence for developmental programming of the skeleton? *American Journal of Physical Anthropology,* 144 (S52): 124-125.

Devlin MJ, Grasemann C, Cloutier AM, Palmert M, Bouxsein ML. (2010) Maternal perinatal diet induces developmental programming of bone architecture. *Journal of Bone and Mineral Research* 25(S1).

Kawai M, Bornstein S, Lotinun S, **Devlin MJ,** Bouxsein ML, Horowitz MC, Baron R, Rosen CJ. (2010) The Misty mouse which has minimal brown adipose tissue (BAT) has markedly reduced bone mass and altered microarchitecture. *Journal of Bone and Mineral Research* 25(S1).

Devlin MJ, Cloutier AM, Pinz I, Rosen CJ, Bouxsein ML. (2010) Why does starvation make bones fat? *American Journal of Physical Anthropology,* 141 (S50): 71-72.

Devlin MJ, Cloutier AM, Thomas NA, Pinz I, Preda M, Rosen CJ, Bouxsein ML. (2009) Greater Skeletal Response to Caloric Restriction in C57Bl/6J vs. FVB Mice. *Journal of Bone and Mineral Research* 24(S1).

Roberts B, **Devlin M**, Thomas N, Brimer D, Proctor A, Bouxsein M. (2009) Use of a novel microindentation system demonstrates age- and strain related differences in cortical bone material properties in C3H/HeJ and C57Bl6/J mice. *Journal of Bone and Mineral Research* 24(S1).

Devlin MJ, Panus DA, Thomas N, Rosen CJ, and Bouxsein ML. (2009) Energy source, caloric intake, and bone acquisition during growth: implications for human skeletal phenotype. *American Journal of Physical Anthropology*, 138 (S48): 174.

Devlin M, Panus D, Bouxsein M. (2009) Blunted skeletal response to PTH retreatment in mice following an interruption in dosing. *Bone* 44: S68-S98.

Devlin MJ, Stetter CM, Lin HM, Beck TJ, Legro RS, Lieberman DE, Lloyd T. (2008) Peripubertal estrogen levels and physical activity affect young adult bone strength in women. *American Journal of Physical Anthropology,* 135 (S46): 89.

Devlin MJ, Panus D, Rosen CJ, Bouxsein ML. (2008) Both excess and restricted energy availability negatively influence acquisition of trabecular bone mass and microarchitecture during growth. *Journal of Bone and Mineral Research* 23(S1): 501.

Devlin MJ, Lieberman DE. (2007) Complex interactions between estrogen, strain, and exercise-induced periosteal bone growth. *American Journal of Physical Anthropology*, 132 (S44): 99.

Devlin MJ, Lieberman DE, Ledoux, N. (2006) Estradiol, strain, and periosteal bone growth. *American Journal of Physical Anthropology,* 129 (S42): 83.

Devlin MJ, Lieberman DE, Ledoux, N. (2006) Effects of estradiol and strain on periosteal bone growth. *Integrative and Comparative Biology,* 2006 SICB Meetings Supplement.

Devlin MJ, Lieberman DE, Olsen BR, Fukai N. (2005) Estradiol, estrogen receptor alpha, and osteogenic responses to mechanical loading. *American Journal of Physical Anthropology*, 126 (S40): 94-95.

Devlin MJ, Lieberman DE, Olsen BR, Fukai N. (2005) The role of estradiol in mechanotransduction. *Integrative and Comparative Biology,* 2005 SICB Meetings Supplement.

Devlin MJ. (2004) Variation in estradiol level affects diaphyseal bone growth in response to mechanical loading. *American Journal of Physical Anthropology,* 123 (S38): 86-87.

Devlin MJ, Pontzer H, Lieberman DE, Polk JD. (2003) Trabecular bone orientation in flexed versus extended postures in guinea fowl: a test of Wolff's Law. *American Journal of Physical Anthropology,* 120 S36: 88-89.

Devlin MJ, Lieberman DE, Krovitz G. (2002) Experimental test of the effects of masticatory forces on facial growth. *American Journal of Physical Anthropology,* 117 (S34): 62.

Devlin MJ. (2001) Wolff's Law in sheep's clothing: limb joint response to experimentally induced mechanical loading. *American Journal of Physical Anthropology,* 114 (S32): 58.

Devlin MJ, Lieberman DE, Pearson OM. (2000) An experimental test of articular surface response to mechanical loading. *American Journal of Physical Anthropology*, 111 (S30): 138-139.

PROFESSIONAL SERVICE

Peer reviewer: *American Journal of Human Biology; American Journal of Physical Anthropology; American Journal of Physiology-Endocrinology and Metabolism; Bone; British Journal of Nutrition; Calcified Tissue International; Endocrinology; Fertility and Sterility; Growth; Hormone and Metabolic Research; Human Reproduction; Journal of Anatomy; Journal of Bone and Mineral Research; Journal of Clinical Endocrinology & Metabolism; Journal of Endocrinology; Journal of Human Evolution; Journal of Morphology; Reproduction*

Grant reviewer: Auckland Medical Research Foundation; Leakey Foundation; Lewis and Clark Fund for Exploration and Field Research; National Science Foundation

Member: American Association of Physical Anthropology, Program Committee (2012-2014), Student Prize Committee (2013-)
American Society for Bone and Mineral Research

SYMPOSIA AND INVITED TALKS

2014 Department of Anthropology, University of New Mexico.

2012 **Co-chair,** Symposium: Finding our inner animal: understanding human evolutionary variation via experimental model systems, American Association of Physical Anthropology annual meeting, Portland, Oregon

2012 Harvard Medical School/Harvard School of Dental Medicine/Massachusetts General Hospital Bone Research Series

2007 Brown University Department of Ecology and Evolutionary Biology

2007 Beth Israel Deaconess Medical Center Orthopedic Biomechanics Laboratory

2008 University of Connecticut Department of Anthropology

STUDENT ADVISING

PhD thesis committee

Lauren Sarringhaus (PhD, Michigan, 2013)

Undergraduate honors thesis

Hollie Kicinski (Michigan, 2014)

Courtney Weber (Michigan, 2014)

COURSES TAUGHT

2013- *Biological Anthropology, University of Michigan*
Nutrition and Evolution (Anthrbio 364)
Human Growth & Development across the Life Cycle (Anthrbio 462)
Topics in Biological Anthropology (Anthrbio 469)
Research in Biological Anthropology: Skeletal Biology (Anthrbio 471)
Problems in Nutrition, Growth, and Aging (Anthrbio 664)

2003-2005 *Teaching Fellow, Biological Anthropology, Harvard University*
Introduction to Human Evolution (Science B-27)
Advanced Structure and Physiology of the Vertebrates (Biology 121a)
Human Anatomy (Anthropology 142/1420)

1998-2001 Teaching Assistant, Biological Anthropology, George Washington University
Introduction to Biological Anthropology