

---

## BIOGRAPHICAL SKETCH

---

NAME Joseph M. Zmuda	POSITION TITLE Associate Professor
eRA COMMONS USER NAME z mudaj	

EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
University of Rhode Island, Kingston, RI	B.S.	1989	Nutrition
University of Rhode Island, Kingston, RI	M.S.	1991	Exercise Physiology
University of Pittsburgh, Pittsburgh, PA	M.P.H.	1996	Epidemiology
University of Pittsburgh, Pittsburgh, PA	Ph.D.	2000	Epidemiology

### A. Personal Statement

Dr. Zmuda is an Associate Professor of Epidemiology and Human Genetics with Tenure at the University of Pittsburgh. Dr. Zmuda's research focuses on understanding the effects of aging, endocrine changes and genetics on body composition with a particular interest in bone and mineral metabolism. He and his colleagues have evaluated the contributions of hormones to body composition and bone loss among older men, the influence of body composition and medical/lifestyle factors on bone health, and race differences in body composition and bone health. He directs the Department's Molecular Epidemiology Laboratory which develops biomarker assays for epidemiologic studies including ELISA assays of endocrine function and DNA based tests of genetic susceptibility. He is the PI of the Tobago Bone Health Study and a current or past Investigator on several other large epidemiologic studies. Under his leadership, the Tobago research program has provided a rich resource for trainees: 6 MS/MPH students, 19 PhD fellows, 6 post-doctoral scholars, and 3 Academic Career awards have utilized the Tobago research study.

Dr. Zmuda also has considerable experience in training junior investigators. He has served as mentor for 32 PhD and MS/MPH students, 9 post-doctoral fellows including 4 K awardees, 5 undergraduate students, and serves or has served as faculty mentor on 5 NIH training grants. Several of his trainees are currently in tenured/tenure-track faculty positions at well-respected institutions. Most notably, he served as primary post-doctoral (F32-HL083641) and K Award (K01-DK083029) mentor and cultivated the career development of Dr. Iva Miljkovic who has established an independent research program on the epidemiology of diabetes and obesity utilizing the Tobago cohort. Dr. Miljkovic recently received her first NIH R01 (DK097084) to continue to her research on obesity and diabetes in the Tobago cohort study.

### B. Positions and Honors

#### Positions and Employment

1989 - 1992	Research Assistant, Division of Preventive Cardiology, The Miriam Hospital, Providence, RI
1992 - 1996	Research Specialist, Division of Preventive Cardiology, University of Pittsburgh, Pittsburgh, PA
1996-2000	Research Specialist V, Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA
2001-2003	Assistant Professor (non-tenure stream), Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA.
2003-2009	Assistant Professor (tenure stream), Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA.
2004-2011	Assistant Professor, Department of Human Genetics, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA.
2010-present	Associate Professor (with tenure), Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA.
2011-present	Associate Professor, Department of Human Genetics, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA.

---

## Honors and Awards

US PHS Traineeship (1995-1996); National Osteoporosis Foundation Fellowship Award (1997); Judy S. Finkelstein Memorial Award (1998); American Federation for Aging Research Award (2001); Young Investigator Award, ASBMR (2003).

## Service

2005 National Institute on Aging, Special Emphasis Review Panel, Member  
2005 National Heart, Lung & Blood Institute, Special Emphasis Review Panel, Member  
2006-2013 American Federation for Aging Research National Scientific Advisory Council, Member  
2008-2014 National Institute on Aging, Special Emphasis Review Panel, Member  
2008 National Institute of Arthritis and Musculoskeletal and Skin Diseases, Bone Biology and Diseases Roundtable  
2009-2013 Neurological, Aging, & Musculoskeletal Epidemiology Study Section (NAME), AdHoc Reviewer  
2010 National Institute on Aging, Program Project Grant Review  
2010 National Institutes of Health, Director's Opportunity Special Emphasis Review Panel

## **C. Publications (selected from 205 publications)**

1. \*Roth SM, **Zmuda JM**, Cauley JM, Shea PR, Ferrell RE. Vitamin D Receptor Genotype is Associated with Fat Free Mass and Sarcopenia in Elderly Men. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences* 2004; 59(1):10-5.
  2. Cauley JA, **Zmuda JM**, Wisniewski SR, Krishnaswami S, Palermo L, Stone KL, Black DM, Nevitt MC. Bone Mineral Density and Prevalent Vertebral Fractures in Men and Women. *Osteoporosis International* 2004; 15(1):32-7.
  3. Purchase-Helzner EL, Cauley JA, Faulkner KA, Pratt S, **Zmuda JM**, Talbott EO, Hochberg MC, Stone K. Hearing Sensitivity, Falls and Fracture in Older Women: The Study of Osteoporotic Fractures. *Annals of Epidemiology* 2004; 14 (5): 311-318.
  4. Jacob AC, **Zmuda JM**, Cauley JA, Metter EJ, Hurley BF, Ferrell RE, Roth SM. Ciliary Neurotrophic Factor (CNTF) Genotype and Body Composition. *European Journal of Human Genetics* 2004; 12(5):372-6.
  5. Whooley MA, Cauley JA, **Zmuda JM**, Glynn NW. Depressive Symptoms and Bone Mineral Density in Men. *Journal of Geriatric Psychiatry and Neurology* 2004; 17(2):88-92.
  6. Strotmeyer ES, Cauley JA, Schwartz AV, Nevitt MC, Resnick HE, **Zmuda JM**, Bauer DC, Newman AB. The Influence of Diabetes and Body Composition on Bone Mineral Density in Older Men and Women: The Health, Aging and Body Composition Study. *Journal of Bone and Mineral Research* 2004; 19(7):1084-1091.
  7. \*Moffett SP, **Zmuda JM**, Cauley JA, Stone K, Nevitt M, Ensrud M, Hillier TA, Hochberg MC, Joslyn G, Morin P, Cummings SR. for the SOF Research Group. The G-174C Variant in the Interleukin 6 Promoter Region Is Associated With Bone Loss and Fracture Risk In Older Women. *Journal of Bone and Mineral Research* 2004; 19(10):1612-8.
  8. Cauley JA, Lui LY, Stone KL, Hillier TA, **Zmuda JM**, Hochberg MC, Beck TJ, Ensrud K. Longitudinal Study of Changes in Hip Bone Mineral Density and Size Among Caucasian and African-American Women. *Journal of the American Geriatrics Society* 2005; 53(2):183-9.
  9. Walsh S, **Zmuda JM**, Cauley JA, Shea PR, Metter EJ, Hurley BF, Ferrell RE, and Roth SM. Androgen Receptor CAG Repeat Polymorphism is Associated with Fat Free Mass in Men. *Journal of Applied Physiology* 2005; 98(1) 132-7.
  10. Cauley JA, Li-Yung L, Ensrud KE, **Zmuda JM**, Stone KL, Hochberg MC, Cummings SR. Bone Mineral Density and the Risk of Incident Non-Spine Fractures in Black and White Women: The Study of Osteoporotic Fractures. *JAMA*. 2005; 293(17): 2102-2108.
  11. \*Moffett SP, **Zmuda JM**, Oakley JI, Beck TJ, Cauley JA, Stone KL, Lui LY, Ensrud KE, Hillier TA, Hochberg MC, Greene G, Peltz P, for the SOF Research Group. Tumor Necrosis Factor Alpha Polymorphism, Bone Strength Phenotypes, and the Risk of Fracture in Older Women. *Journal of Clinical Endocrinology and Metabolism* 2005; 90(6):3491-7.
-

12. Modugno F, **Zmuda JM**, Potter D, Cai C, Ziv E, Cummings S, Stone KL, Cauley JA. The Association of Estrogen Receptor  $\alpha$  Polymorphisms with Breast Cancer Risk in Elderly White Women. *International Journal of Cancer* 2005; 116(6):984-91.
  13. Lian K, **Zmuda JM**, Nevitt MC, Lui L, Hochberg MC, Greene D, Li J, Lane NE. Collagen Type IA1 Sp1 Transcription Factor Binding Site Polymorphism is Associated with Reduced Risk of Hip OA Defined by Significant Joint Space Narrowing in Elderly Women. *Arthritis and Rheumatism*. 2005; 52(5):1431-6.
  14. Cauley JA, Fullman RL, Stone KL, **Zmuda JM**, Bauer DC, Barrett-Connor E, Ensrud K, Lau E MC, Orwoll ES. Factors Associated with Lumbar Spine and Proximal Femur Bone Mineral Density in Older Men. *Osteoporosis International* 2005; 16(12):1525-37.
  15. Helzner EP, Cauley JA, Pratt S, Wisniewski S, **Zmuda JM**, Talbott EO, de Rekeniere N, Harris T, Rubin S, Simonsick EM, Tylavsky FA, Newman AB. Hearing Sensitivity and Bone Mineral Density in Older Adults: The Health, Aging and Body Composition Study. *Osteoporosis International* 2005; 16(12):1675-82.
  16. Helzner EP, Cauley JA, Pratt S, Wisniewski S, **Zmuda JM**, Talbott EO, de Rekeniere N, Harris T, Rubin S, Simonsick EM, Tylavsky FA, Newman AB. Race and Sex Differences in Age-Related Hearing Loss: The Health, Aging and Body Composition Study. *Journal of the American Geriatrics Society* 2005 53(12):2119-27.
  17. Semanick LM, Beck TJ, Cauley JA, Wheeler VW, Patrick AL, Bunker CH, **Zmuda JM**. Association of Body Composition and Physical Activity With Proximal Femur Geometry In Middle-Aged And Elderly Afro-Caribbean Men: The Tobago Bone Health Study. *Calcified Tissue International* 2005; 77(3):160-6.
  18. Forrest KYZ, **Zmuda JM**, Cauley JA. Patterns and Determinants of Muscle Strength Change with Aging in Older Men. *Aging Male*. 2005; 8(3-4):151-156.
  19. Modugno F, **Zmuda JM**, Potter D, Cai C, Ziv E, Cummings SR, Stone KL, Morin PA, Greene D, Cauley JA. Estrogen Metabolizing Polymorphisms and Breast Cancer Risk Among Older White Women. *Breast Cancer Research and Treatment* 2005; 93(3):261-70.
  20. Storti KL, Brach JS, FitzGerald SJ, **Zmuda JM**, Rexroad AM, Cauley JA, Kriska AM. Physical Activity and Decreased Risk of Gallstone Disease Among Post-Menopausal Women. *Preventive Medicine* 2005; 41(3-4):772-7.
  21. \*Faulkner K, Cauley JA, Landsittel D, Newman A, Redfern M, Studenski S, **Zmuda JM**. Ethnic Differences in the Frequency and Circumstances of Falling in Older Community-Women. *Journal of the American Geriatrics Society* 2005; 53(10):1774-9.
  22. Okobia MN, Bunker CH, **Zmuda JM**, Kammerer CM, Vogel VG, Uche EEO, Anyanwu SNC, Ezeome ER, Ferrell RE, Kuller LH. Cytochrome P4501A1 Genetic Polymorphisms and Breast Cancer Risk in Nigerian Women. *Breast Cancer Research and Treatment* 2005; 94:285-93.
  23. Daniels NA, Ewing SK, **Zmuda JM**, Wilt TJ, Bauer DC, MrOS Research Group. Correlates and Prevalence of Prostatitis In A Large Community-Based Cohort of Older Men. *Urology* 2005; 66(5):964-70.
  24. \*Sheu YT, **Zmuda JM**, Cauley JA, Rosen CJ, Ishwad C, Ferrell RE. Nuclear Receptor Coactivator-3 Alleles are Associated with Serum Bioavailable Testosterone, Insulin-Like Growth Factor-I, and Vertebral Bone Mass in Men. *Journal of Clinical Endocrinology and Metabolism* 2006; 91(1):307-12.
  25. Faulkner KA, Redfern MS, Rosano C, Landsittel DP, Studenski SA, Cauley JA, **Zmuda JM**, Simonsick EM, Kritchevsky SB, Newman AB for the Health ABC Study. Reciprocal Influence of Concurrent Walking and Cognitive Testing on Performance in Older Adults. *Gait and Posture* 2006; 24(2):182-9.
  26. Forrest KY, **Zmuda JM**, Cauley JA. Correlates of decline in lower extremity performance in older women: A 10-year follow-up study. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences* 2006; 61(11):1194-200. PMID: 17167162.
  27. Lane NE, Lian K, Nevitt MC, **Zmuda JM**, Lui L, Wang J, Fontecha M, Umblas N, Rosenbach M, de Leon P, Corr M. Frizzled Related Protein Variants are Risk Factors for Hip Osteoarthritis. *Arthritis and Rheumatism* 2006; 54(4):1246-54.
-

28. **Zmuda JM**, Modugno F, Weissfeld JL, Cauley JA, Trump DL, Moffett SP, Ferrell RE. Peroxisome Proliferator-Activated Receptor- $\gamma$  Polymorphism, Body Mass and Prostate Cancer: Evidence for Gene-Environment Interaction. *Oncology* 2006; 70:185-189.
  29. Taylor BC, Schreiner PJ, **Zmuda JM**, Li J, Moffett SP, Beck TJ, Cummings SR, Lee JM, Walker K, Ensrud KE. Association of Endothelial Nitric Oxide Synthase Genotypes with Bone Mineral Density, Bone Loss, Hip Structure and Risk of Fracture in Older Women: The SOF Study. *Bone* 2006; 39(1):174-80.
  30. \*Faulkner KA, Cauley JA, **Zmuda JM**, Landsittel DP, Newman AB, Studenski SA, Redfern MS, Ensrud KE, Fink HA, Lane NE, Nevitt MC. Higher 1,25-dihydroxyvitamin D<sub>3</sub> Concentrations Associated With Lower Fall Rates In Older Community-Dwelling Women. *Osteoporosis International* 2006; 17(9):1318-28.
  31. Okobia MN, Bunker CH, Kuller LH, Ferrell RE, **Zmuda JM**, Uche EEO, Anyanwu SNC, Ezeome ER. Anthropometry and Breast Cancer Risk in Nigerian Women. *The Breast Journal* 2006 12(5):462-6.
  32. Taylor BC, Wilt TJ, Fink HA, Lambert LC, Marshall LM, Hoffman AR, Beer TM, Bauer DC, **Zmuda JM**, Orwoll ES, for the MrOS Study. Prevalence, Severity and Health Impact of Lower Urinary Tract Symptoms Among Older Men: The MrOS Study. *Urology* 2006; 68(4):804-9.
  33. Okobia MN, Bunker CH, Kuller LH, Ferrell RE, **Zmuda JM**, Vogel VG, Uche EEO, Anyanwu SNC, Ezeome ER. Case-Control Study of Risk Factors for Breast Cancer In Nigerian Women. *The International Journal of Cancer* 2006; 119:2179-2185.
  34. Okobia MN, Bunker CH, **Zmuda JM**, Ezeome ER, Anyanwu SNC, Uche EEO, Ojukwu J, Kuller LH, Ferrell RE. Simple Tandem Repeat (TTTA)<sub>n</sub> Polymorphism in CYP19 (Aromatase) Gene and Breast Cancer Risk in Nigerian Women. *Journal of Carcinogenesis* 2006; 5:12.
  35. Marshall LM, Lang TF, Lambert LC, **Zmuda JM**, Cauley JA, Ensrud KE, Lewis CE, Stefanick ML, Orwoll ES. Dimensions and Volumetric Bone Density of the Proximal Femur and their Relation to Age Among Older US Men. *Journal of Bone and Mineral Research* 2006; 21(8):1197-1206.
  36. Bunker CH, **Zmuda JM**, Patrick AL, Weissfeld JL, Kuller LH, Cauley JA. High Bone Density is Associated with Prostate Cancer in Older Afro-Caribbean Men: The Tobago Prostate Survey. *Cancer Causes and Control* 2006; 17(8):1083-1089.
  37. Ding J, Nicklas BJ, Fallin MD, deRekeneire N, Kritchevsky SB, Pahor M, Rodondi N, Li R, **Zmuda JM**, Harris TB. Plasminogen Activator Inhibitor Type-1 (PAI-1) Gene Polymorphisms and Haplotypes Are Associated with Plasma PAI-1 Levels, but Not with Myocardial Infarction or Stroke. *American Heart Journal* 2006; 152(6):1109-15.
  38. Strotmeyer ES, Cauley JA, Schwartz AV, de Rekeneire N, Resnick HE, **Zmuda JM**, Goodpaster BH, Shorr RI, Tylavsky FA, Vinik AI, Harris TB, Newman AB. Reduced Peripheral Nerve Function Is Related to Lower Hip BMD and Calcaneal QUS in Older White and Black Adults: The Health, Aging and Body Composition Study. *Journal of Bone and Mineral Research* 2006; 21:1803-1810.
  39. Forrest KYZ, **Zmuda JM**, Cauley JA. Patterns and Correlates of Muscle Strength Loss in Older Women. *Gerontology* 2007; 53:140-147.
  40. \*Miljkovic-Gacic I, Wang X, Kammerer CM, Bunker CA, Wheeler VW, Patrick AL, Kuller LH, Evans RW, **Zmuda JM**. Genetic Determination of Adiponectin and its Relationship with Body Fat Topography in Multigenerational Families of African Heritage. *Metabolism* 2007; 56(2):234-38. PMC2895550
  41. Cappola AR, Ratcliffe SJ, Bhasin S, Blackman MR, Cauley J, Robbins J, **Zmuda JM**, Harris T, Fried LP. Determinants of Serum Total and Free Testosterone Levels in Women Over the Age of 65. *Journal of Clinical Endocrinology and Metabolism* 2007; 92(2):509-16.
-

42. \*† Wang X, Kammerer CM, Wheeler VW, Patrick AL, Bunker CH, **Zmuda JM**. Genetic and Environmental Determinants of Volumetric and Areal Bone Density in Multi-Generational Families of African Ancestry: The Tobago Family Health Study. *Journal of Bone and Mineral Research* 2007;22(4):527-36.
- † *Recipient of the ASBMR Raisz-Drezner Journal of Bone and Mineral Research First Paper Award*
43. \*Moffett SP, **Zmuda JM**, Cauley JA, Ensrud KE, Hillier TA, Hochberg MC, Li J, Cayabyab S, Lee JM, Peltz G, Cummings SR. Association of the VDR Translation Start Site Polymorphism and Fracture Risk in Older Women. *Journal of Bone and Mineral Research* 2007; 22(5):730-36.
44. Reich D, Patterson N, Ramesh V, De Jager PL, McDonald GJ, Tandon A, Choy E, Hu D, Tamraz B, Pawlikowska L, Wassel-Fyr C, Huntsman S, Waliszewska A, Rossin E, Li R, Garcia M, Reiner A, Ferrell R, Cummings S, Kwok PY, Harris T, **Zmuda JM**, Ziv E; Health, Aging and Body Composition (Health ABC) Study. Admixture Mapping of an Allele Affecting Interleukin 6 Soluble Receptor and Interleukin 6 Levels. *American Journal of Human Genetics* 2007; 80(4):716-26.
45. Shaffer JR, Kammerer CM, Reich D, McDonald G, Patterson N, Goodpaster B, Bauer DC, Li J, Newman AB, Cauley JA, Harris TB, Tylavsky F, Ferrell RE, Garcia M, **Zmuda JM**. Genetic Markers for Ancestry are Correlated with Musculoskeletal Traits in Older African Americans: The Health, Aging and Body Composition Study. *Osteoporosis International* 2007; 18(6):733-41.
46. Levy ME, Parker RA, Ferrell RE, **Zmuda JM**, Greenspan L. Farnesyl Diphosphate Synthase (FDPS): A Novel Genotype Association with BMD in Elderly Women. *Maturitas* 2007;57:247-52.
47. Lian KC, Lui L, **Zmuda JM**, Nevitt MC, Hochberg MC, Mangacat Lee J, Li J, Lane NE, For the Study of Osteoporotic Fractures. Estrogen Receptor Alpha Genotype is Associated with a Reduced Prevalence of Radiographic Hip Osteoarthritis in Elderly Caucasian Women. *Osteoarthritis & Cartilage* 2007;15(8):972-8.
48. Cauley JA, Danielson ME, Boudreau R, Forrest KYZ, **Zmuda JM**, Pahor M, Tylavsky FA, Cummings SR, Harris TB, Newman AB. Inflammatory Markers and Incident Fracture Risk in Older Men and Women: The Health Aging and Body Composition (Health ABC) Study. *Journal of Bone and Mineral Research* 2007; 22(7):1088-95.
49. \*Wang X, Kammerer CM, Wheeler VW, Patrick AL, Bunker CH, **Zmuda JM**. Pleiotropy and Heterogeneity in the Expression of Bone Strength Related Phenotypes in Extended Pedigrees. *Journal of Bone and Mineral Research* 2007; 22(11):1766-72.
50. Prior SJ, Roth SM, Wang XJ, Kammerer C, Miljkovic-Gacic I, Bunker CH, Wheeler VW, Patrick AL, **Zmuda JM**. Genetic and Environmental Influences on Skeletal Muscle Phenotypes as a Function of Age and Sex in Large, Multi-generational Families of African Heritage. *Journal of Applied Physiology* 2007; 103(4):1121-7. PMC2811418
- Related Editorial: [Franks PW](#). Muscling in on the Genetics of Quantitative Disease Traits. *Journal of Applied Physiology* 2007;103(4):1111-2.
51. Yende S, Angus DC, Ding J, Newman AB, Kellum JA, Li R, Ferrell RE, **Zmuda JM**, Kritchevsky SB, Harris TB, Garcia M, Yaffe K, Wunderink RG, for the Health ABC Study. 4G/5G Plasminogen Activator Inhibitor-1 Polymorphisms and Haplotypes are Associated with Pneumonia. *American Journal of Respiratory and Critical Care Medicine* 2007; 176(11):1129-37.
52. Nalls MA, Wilson JG, Patterson NJ, Tandon A, **Zmuda JM**, Huntsman S, Garcia M, Hu D, Li R, Beamer BA, Patel KV, Akyzbekova EL, Files JC, Hardy CL, Buxbaum SG, Taylor HA, Reich D, Harris TB, Ziv E. Admixture Mapping of White Cell Count: Genetic Locus Responsible for Higher White Blood Cell Count in European Americans than African Americans in the Health, Aging and Body Composition Study and the Jackson Heart Study. *American Journal of Human Genetics* 2008; 82(1):81-7. PMC2253985
-

53. Hill DD, Cauley JA, Sheu YT, Bunker CH, Baker CE, Patrick AL, Beckles GLA, **Zmuda JM**. Correlates of Bone Mineral Density in Men of African Ancestry: The Tobago Bone Health Study. *Osteoporosis International* 2008; 19(2):227-34. PMC Journal – In Process
54. †Marshall LM, †**Zmuda JM**, Chan BKS, Cauley JA, Lang TF, Barrett-Connor E, Ensrud KE, Orwoll ES, for the Osteoporotic Fractures in Men (MrOS) Research Group. Race and Ethnic Variation in Proximal Femur Structure and Bone Density Among Older Men. *Journal of Bone and Mineral Research* 2008; 23(1):121-30. PMC2663587 †These authors contributed equally to this work.
55. \*Miljkovic-Gacic I, Gordon CL, Goodpaster BH, Bunker CH, Patrick AL, Kuller LH, Wheeler VW, Evans RW, **Zmuda JM**. Adipose Tissue Infiltration in Skeletal Muscle: Age Patterns and Association with Diabetes Among Men of African Heritage. *American Journal of Clinical Nutrition* 2008; 87(6):1590-5. PMC2532786  
Related Editorial: [Elbein SC](#), [Rasouli N](#). Intermuscular Lipid: A Marker of Disordered Fat Partitioning or the Consequence of Obesity? *American Journal of Clinical Nutrition* 2008; 87(6):1585-6.
56. \*Miljkovic-Gacic I, Wang X, Kammerer CM, Bunker CH, Patrick AL, Wheeler VW, Kuller LH, Evans RW, **Zmuda JM**. Sex and Genetic Effects on Upper and Lower Body Fat and Associations with Diabetes in Multigenerational Families of African Heritage. *Metabolism* 2008; 57:819-23. PMC2474724
57. \*Moffett SP, Oakley JI, Cauley JA, Lui LY, Ensrud KE, Hillier TA, Hochberg MC, Peltz G, Cummings SR, **Zmuda JM**, for the SOF Research Group. Osteoprotegerin Lys<sup>3</sup>Asn Polymorphism and the Risk of Fracture in Older Women. *Journal of Clinical Endocrinology and Metabolism* 2008; 93(5):2002-8. PMC2386283
58. \*Miljkovic-Gacic I, Wang X, Kammerer CM, Gordon CL, Goodpaster BH, Bunker CH, Kuller LH, Patrick AL, Wheeler VW, Evans RW, **Zmuda JM**. Fat Infiltration in Muscle: New Evidence for Familial Clustering and Associations with Diabetes. *Obesity*. 2008; 16(8):1854-60. PMC2895815
59. Okobia MN, **Bunker CH**, Garte SJ, Zmuda JM, Ezeome ER, Anyanwu SN, Uche EE, Kuller LH, Ferrell RE, Taioli E. Leptin Receptor Gln233Arg Polymorphism and Breast Cancer Risk in Nigerian Women: A Case Control Study. *BMC Cancer* 2008;8:338. PMC2613914
60. Hill DD, Cauley JA, Bunker CH, Baker CE, Patrick AL, Beckles GLA, Wheeler VW, **Zmuda JM**. Correlates of Bone Mineral Density among Postmenopausal Women of Afro-Caribbean Ancestry: Tobago Women's Health Study. *Bone* 2008; 43(1):156-61. PMC2519239
61. Tranah GJ, Taylor BC, Lui L-Y, **Zmuda JM**, Cauley JA, Ensrud KE, Hillier TA, Hochberg MC, Li J, Rhee B, Erlich H, Sternlicht MD, Peltz G, Cummings SR for the SOF Research Group. Gene Variation in Candidate Osteoporosis Genes, Bone Mineral Density, and Fracture Risk: The Study of Osteoporotic Fractures. *Calcified Tissue International* 2008; 83(3):155-66. PMC2699257
62. \*Yerges LM, Moffett SP, Wheeler VW, Cauley JA, Bunker CH, Patrick AL, Ferrell RE, **Zmuda JM**. Functional Characterization of Genetic Variation in the Frizzled 1 (FZD1) Promoter and Association with Bone Phenotypes: More to the LRP5 Story? *Journal of Bone and Mineral Research* 2009; 24(1):87-96. PMC2689083
63. Delmonico MJ, **Zmuda JM**, Harris TB, Manini T, Schwarz A, Li R, Roth SM, Hurley BF, Ferrell RE, Newman AB – For the Health ABC and MrOS Studies. Association of the *ACTN3* Genotype and Physical Functioning with Age in Older Adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences* 2008; 63(11):1227-34. PMC2728123
64. Cauley JA, Lui L-Y, Barnes D, Ensrud KE, **Zmuda JM**, Hillier TA, Hochberg MC, Schwartz AV, Yaffe K, Cummings SR, Newman AB. Successful Skeletal Aging: A Marker of Low Fracture Risk and Longevity. The Study of Osteoporotic Fractures (SOF). *Journal of Bone and Mineral Research* 2009; 24(1):134-43. PMC2605163
-

65. **Zmuda JM**, Yerges LM, Kammerer CM, Cauley JA, Wang X, Nestlerode CS, Wheeler VW, Patrick AL, Bunker CH, Moffett SP, Ferrell RE. Association Analysis of WNT10B with Bone Mass and Structure among Individuals of African Ancestry. *Journal of Bone and Mineral Research* 2009; 24(3):437-47. PMC2659518
  66. Farhat GN, Taioli E, Cauley JA, **Zmuda JM**, Orwoll E, Bauer DC, Wilt T, Hoffman A, Beer T, Shikany J, Daniels N, Chan J, Fink H, Barrett-Connor E, Parsons JK, Bunker CH. The Association of Bone Mineral Density with Prostate Cancer in the Osteoporotic Fractures in Men (MrOS) Study. *Cancer Epidemiology Biomarkers and Prevention* 2009; 18(1):148-54. PMC2651680
  67. Eriksson A, Lorentzon M, Vandenput L, Labrie F, Lindersson M, Syvanen A-C, Orwoll E, Cummings S, **Zmuda J**, Ljunggren, Karlsson M, Mellstrom D, Ohlsson C. Genetic Variations in Sex Steroid-Related Genes as Predictors of Serum Estrogen Levels in Men. *Journal of Clinical Endocrinology and Metabolism* 2009; 94(3):1033-41. PMC2681277
  68. Okobia MN, Bunker CH, Garte SJ, **Zmuda JM**, Ezeome E, Anyanwu SN, Uche EE, Osime U, Ojukwu J, Kuller LH, Ferrell RE, Taioli E. Cytochrome P450 1B1 Val432Leu Polymorphism and Breast Cancer Risk in Nigerian Women: A Case Control Study. *Infectious Agents and Cancer* 2009; Feb10;4 Suppl 1:s12. PMC2638457
  69. Xiong DH, Liu, XG, Guo YF, Tan LJ, Wang L, Sha BY, Tang ZH, Pan F, Yang TL, Chen XD, Lei SF, Yerges LM, Zhu XZ, Wheeler VW, Patrick AL, Bunker CH, Guo Y, Yan H, Pei YF, Zhang YP, Levy S, Papiasian CJ, Xiao P, Lundberg YW, Recker RR, Liu YZ, Liu YJ, **Zmuda JM**, Deng HW. Genome-wide Association and Follow-up Replication Studies Identified ADAMTS18 and TGFBR3 as Bone Mass Candidate Genes in Different Ethnic Groups. *American Journal of Human Genetics* 2009; 84(3):388-98. PMC2667986
  70. Moffett SP, Dillon KA, Yerges LA, Goodrich LJ, Nestlerode C, Bunker C, Wheeler VW, Patrick A, **Zmuda JM**. Identification and Association Analysis of Single Nucleotide Polymorphisms in the Human Noggin (NOG) Gene and Osteoporosis Phenotypes. *Bone* 2009; 44(5):999-1002. NIHMS112885
  71. Iuliano AD, Feingold E, Wahed AS, Kleiner DE, Belle SH, Conjeevaram HS, **Zmuda J**, Liang TJ, Yee LJ for the Virahep-C Study. Host Genetics, Steatosis and Insulin Resistance among African Americans and Caucasian Americans with Hepatitis C Virus Genotype-1 Infection. *Intervirology* 2009; 52(1):49-56. PMC2803674
  72. Reich D, Nalls MA, Kao WHL, Akylbekova EL, Tandon A, Patterson N, Mullikin J, Hsueh WC, Cheng CY, Coresh J, Boerwinkle E, Li M, Waliszewska A, Neubauer J, Li R, Leak TS, Ekunwe L, Files JC, Hardy CL, **Zmuda JM**, Taylor HA, Ziv E, Harris TB, Wilson JG. Reduced Neutrophil Count in People of African Descent is Due to a Regulatory Variant in the Duffy Antigen Receptor for Chemokines gene. *PLoS Genetics* 2009 January; 5(1):e1000360. PMC2628742
  73. \*Sheu Y, Cauley JA, Wheeler VW, Patrick AL, Bunker CH, Kammerer CM, **Zmuda JM**. Natural History and Correlates of Hip BMD Loss with Aging in Men of African Ancestry: The Tobago Bone Health Study. *Journal of Bone and Mineral Research* 2009; 24(7):1290-8. PMC2697627
  74. Okamura T, Sekikawa A, Kadowaki T, El-Saed A, Abbott RD, Curb JD, Edmundowicz D, Nakamura Y, Murata K, Kashiwagi A, Sutton-Tyrrell K, Evans RW, **Zmuda JM**, Maegawa H, Hozawa A, Mitsunami K, Nisio Y, Miljkovic-Gacic I, Horie M, Miyamastu N, Murakami Y, Kuller LH, Ueshima H. Cholesteryl Ester Transfer Protein, Coronary Calcium, and Intima-Media Thickness of the Carotid Artery in Middle-Age Japanese Men. *American Journal of Cardiology* 2009; 104(6):818-22. PMC2830799
  75. \*Miljkovic I, Li H, Yerges LM, Gordon CL, Goodpaster BH, Kuller LH, Nestlerode C, Bunker CH, Patrick AL, Wheeler VW, **Zmuda JM**. Association of the *CPT1B* Gene with Skeletal Muscle Fat Infiltration in Afro-Caribbean Men. *Obesity* 2009; 17(7):1396-401. PMC2895554
-

76. Sanders JL, Cauley JA, Boudreau RM, **Zmuda JM**, Strotmeyer ES, Opresko PL, Hsueh W-C, Cawthon RM, Li R, Harris TB, Kritchevsky SB, Newman AB for the Health ABC Study. Leukocyte Telomere Length is not Associated with Bone Mineral Density, Osteoporosis, or Fracture in Older Adults: Results from the Health, Aging and Body Composition Study. *Journal of Bone and Mineral Research* 2009; 24(9):1531-6. PMC2730927
  77. \*Kuipers A, Zhang Y, Cauley JA, Nestlerode CS, Bunker CH, Patrick AL, Wheeler VW, Hoffman AR, Orwoll ES, **Zmuda JM**, for the Osteoporotic Fractures in Men (MrOS) Study Group. Association of a High Mobility Group Gene (HMGA2) Variant with Bone Mineral Density. *Bone* 2009; 45(2):295-300. PMC2795567
  78. Cheng C-Y, Kao WHL, Patterson N, Tandon A, Haiman CA, Harris TB, Xing C, John EM, Ambrosone CB, Brancati FL, Coresh JF, Press MF, Parekh RS, Klag MJ, Meoni LA, Hsueh W-C, Fejerman L, Pawlikowska L, Freedman ML, Jandorf LH, Bandera EV, Ciupak GL, Nalls MA, Akyzbekova EL, Orwoll ES, Leak TS, Miljkovic I, Li R, Ursin G, Bernstein L, Ardlie K, Taylor HA, Boerwinckle E, **Zmuda JM**, Henderson BE, Wilson JG, Reich D. Admixture mapping of 15,280 African Americans identifies obesity susceptibility loci on chromosomes 5 and X. *PLoS Genetics* 2009; 5(5):e1000490. PMC2679192
  79. \*Miljkovic I, Cauley JA, Petit MA, Ensrud KE, Strotmeyer E, Sheu Y, Gordon CL, Goodpaster BH, Bunker CH, Patrick AL, Wheeler VW, Kuller LH, Faulkner KA, **Zmuda JM** for the Osteoporotic Fractures in Men (MrOS) Research Group. Greater Adipose Tissue Infiltration in Skeletal Muscle among Older Men of African Ancestry. *Journal of Clinical Endocrinology and Metabolism* 2009;94(8):2735-42. PMC2730872
  80. Cluett C, McDermott MM, Guralnik J, Ferrucci L, Bandinelli S, Miljkovic I, **Zmuda JM**, Li R, Tranah G, Harris T, Rice N, Henley W, Frayling TM, Murray A, Melzer D. The 9p21 Myocardial Infarction risk allele increases risk of Peripheral Artery Disease in older people. *Circulation Cardiovascular Genetics*. 2009; 2(4):347-53. PMC2777723
  81. \*Yerges LM, Klei L, Cauley JA, Roeder K, Kammerer CM, Moffett SP, Ensrud KE, Nestlerode CS, Marshall LM, Hoffman AR, Lewis C, Lang T, Barrett-Connor E, Ferrell RE, Orwoll ES, **Zmuda JM** for the MrOS Research Group. High-Density Association Study of 383 Candidate Genes for Volumetric Bone Density at the Femoral Neck and Lumbar Spine among Older Men. *Journal of Bone and Mineral Research* 2009; 24(12):2039-49. PMC2791518
  82. \*Sheu Y, Cauley JA, Bunker CH, Wheeler VW, Patrick AL, Gordon CL, Kammerer CM, **Zmuda JM**. Correlates of Trabecular and Cortical Volumetric Bone Mineral Density in Men of African Ancestry. *Journal of Bone and Mineral Research* 2009; 24(12):1960-8. PMC2791513
  83. Ensrud KE, Taylor BC, Paudel M, Cauley JA, Cawthon PM, Cummings SR, Fink HA, Barrett-Connor E, **Zmuda JM**, Shikany JM, Orwoll ES for the Osteoporotic Fractures in Men (MrOS) Study Group. Circulating 25-hydroxyvitamin D Levels and Rate of Hip Bone Loss in Older Men: The Osteoporotic Fractures in Men Study. *Journal of Clinical Endocrinology and Metabolism*. 2009; 94(8):2773-80. PMC2730873
-



84. Cawthon PM, Ensrud KE, Laughlin GA, Cauley JA, Dam TT, Barrett-Connor E, Fink HA, Hoffman AR, Lau E, Lane NE, Stefanick ML, Cummings SR, Orwoll ES, [Bauer DC](#), [Black DM](#), [Nevitt MC](#), [Stone KL](#), [Fullman R](#), [Benard R](#), [Blackwell T](#), [Chau A](#), [Christianson L](#), [Concepcion L](#), [Diehl J](#), [Ewing S](#), [Farrell M](#), [Fox C](#), [Hoffland S](#), [Ireland J](#), [Jaime-Chavez M](#), [Kwan E](#), [Harrison SL](#), [Liu W](#), [Lui LY](#), [Mills A](#), [Nusgarten L](#), [Palermo L](#), [Parimi N](#), [Perreault L](#), [Schneider J](#), [Scott R](#), [Tanaka D](#), [Yeung C](#), [Orwoll E](#), [Phipps K](#), [Marshall L](#), [Babich Blank J](#), [Lambert L](#), [Nielson C](#), [Wang Y](#), [Petersen C](#), [Powell M](#), [Lewis CE](#), [Shikany J](#), [Johnson P](#), [Webb N](#), [Hardy K](#), [Felder S](#), [Wilkoff J](#), [King J](#), [Johnsey T](#), [Young M](#), [Atkins C](#), [Collier C](#), [Smith J](#), [Sassaman C](#), [Ensrud K](#), [Fink H](#), [Nelson N](#), [Van Coevering P](#), [Fillhouer S](#), [Andrews R](#), [Bowie C](#), [Forseth M](#), [Gran R](#), [Imker-Witte F](#), [Luthi S](#), [Moen K](#), [Muehlbauer N](#), [Paudel M](#), [Slindee M](#), [Ziesche S](#), [Stefanick M](#), [Kent K](#), [Ellsworth N](#), [Krauss A](#), [Gupta R](#), [Hartley S](#), [Bowers M](#), [Zmuda J](#), [Danielson M](#), [Harper L](#), [Buck L](#), [Nasim M](#), [Cusick D](#), [Gorecki M](#), [Watson N](#), [Bashada C](#), [Newman C](#), [Carrion-Petersen ML](#), [Miller P](#), [Kamantigue N](#), [Marksbury K](#), [Stephens M](#), [Torres Z](#); Osteoporotic Fractures in Men (MrOS) Research Group. Sex Hormones and Frailty in Older Men: The Osteoporotic Fractures in Men (MrOS) Study. *Journal of Clinical Endocrinology and Metabolism*. 2009 Oct; 94(10):3806-15. PMC2758722
85. Storti KL, Arena VC, Barmada MM, Bunker CH, Hanson RL, Laston SL, Yeh J-L, **Zmuda JM**, Howard BV, Kriska AM. Objectively Measured Physical Activity Levels in American Indian Adults. *American Journal of Preventive Medicine* 2009; 37(6):481-7. PMC2828819
86. \*Goodrich LJ, Yerges-Armstrong LM, Miljkovic I, Nestlerode CS, Kuipers AL, Bunker CH, Patrick AL, Wheeler VW, **Zmuda JM**. Molecular Variation in Neuropeptide Y and Bone Mineral Density among Men of African Ancestry. *Calcified Tissue International* 2009; 85(6): 507-13. NIHMS201400
87. Ensrud KE, Lui LY, Taylor BC, Schousboe JT, Donaldson MG, Fink HA, Cauley JA, Hillier TA, Browner WS, Cummings SR, [Nevitt MC](#), [Bauer DC](#), [Black DM](#), [Stone KL](#), [Browner WS](#), [Benard R](#), [Blackwell T](#), [Cawthon PM](#), [Concepcion L](#), [Dockrell M](#), [Ewing S](#), [Farrell M](#), [Fox C](#), [Fullman R](#), [Harrison SL](#), [Jaime-Chavez M](#), [Kriesel D](#), [Liu W](#), [Lui LY](#), [Palermo L](#), [Parimi N](#), [Rahorst M](#), [Schambach C](#), [Scott R](#), [Ziarno J](#), [Hochberg MC](#), [Nichols R](#), [Link S](#), [Diem SJ](#), [Homan MC](#), [Coevering PV](#), [Fillhouer S](#), [Nelson N](#), [Moen K](#), [Andrews R](#), [Atchison K](#), [Bowie C](#), [Forseth M](#), [Gran R](#), [Imker-Witte F](#), [Jacobson K](#), [Luthi S](#), [Muehlbauer N](#), [Slindee M](#), [Kuller LH](#), [Zmuda JM](#), [Harper L](#), [Buck L](#), [Danielson M](#), [Bashada C](#), [Cusick D](#), [Flaugh A](#), [Gorecki M](#), [Nasim M](#), [Newman C](#), [Watson N](#), [Vesco KK](#), [Pedula KL](#), [Marter JV](#), [Summer M](#), [MacFarlane A](#), [Rizzo J](#), [Snider K](#), [Wallace J](#); Study of Osteoporotic Fractures Research Group. A Comparison of Prediction Models for Fractures in Older Women: Is More Better? *Archives of Internal Medicine* 2009 Dec 14; 169(22):2087-94. PMC2811407
88. \*Yerges LM, Klei L, Cauley JA, Roeder K, Kammerer CM, Ensrud KE, Nestlerode CS, Lewis C, Lang T, Barrett-Connor E, Moffett SP, Hoffman AR, Ferrell RE, Orwoll ES, **Zmuda JM** for the MrOS Research Group. Candidate Gene Analysis of Femoral Neck Trabecular and Cortical Volumetric Bone Mineral Density in Older Men. *Journal of Bone and Mineral Research* 2010 Feb;25(2):330-8. PMC3153388
89. Petit M, Paudel ML, Taylor B, Hughes J, Strotmeyer ES, Schwartz AV, Cauley JA, **Zmuda JM**, Hoffman AR, Ensrud KE. Bone Mass and Strength in Older Men with Type 2 Diabetes: The Osteoporotic Fractures In Men Study. *Journal of Bone and Mineral Research* 2010 Feb;25(2):285-91. PMC3153385
90. [Tranah GJ](#), [Blackwell T](#), [Ancoli-Israel S](#), [Paudel ML](#), [Ensrud KE](#), [Cauley JA](#), [Redline S](#), [Hillier TA](#), [Cummings SR](#), [Stone KL](#), [Nevitt MC](#), [Bauer DC](#), [Black DM](#), [Stone DL](#), [Browner W](#), [Benard R](#), [Cawthon PM](#), [Concepcion L](#), [Dockrell M](#), [Ewing S](#), [Farrell M](#), [Fox C](#), [Fullman R](#), [Harrison SL](#), [Jaime-Chavez M](#), [Liu W](#), [Lui L](#), [Palermo L](#), [Parimi N](#), [Rahorst M](#), [Kriesel D](#), [Schambach C](#), [Scott R](#), [Ziarno J](#), [Hochberg MC](#), [Nichols R](#), [Link S](#), [Ensrud KE](#), [Diem S](#), [Homan M](#), [Van Coevering P](#), [Fillhouer S](#), [Nelson N](#), [Moen K](#), [Imker-Witte F](#), [Jacobson K](#), [Slindee M](#), [Gran R](#), [Forseth M](#), [Andrews R](#), [Bowie C](#), [Muehlbauer N](#), [Luthi S](#), [Atchison K](#), [Kuller LH](#), [Zmuda JM](#), [Harper L](#), [Buck L](#), [Danielson M](#), [Bashada C](#), [Cusick D](#), [Flaugh A](#), [Gorecki M](#), [Nasim M](#), [Newman C](#), [Watson N](#), [Hillier T](#), [Vesco K](#), [Pedula K](#), [Van Marter J](#), [Summer M](#), [MacFarlane A](#), [Rizzo J](#), [Snider K](#), [Wallace J](#) (Study of Osteoporotic Fractures Research Group). Circadian Activity Rhythms and Mortality: The Study of Osteoporotic Fractures. *Journal of the American Geriatric Society* 2010 Feb; 58(2):282-91. PMC2938873
-

91. Kerkhof HJ, Lories RJ, Meulenbelt I, Jonsdottir I, Valdes AM, Arp P, Ingvarsson T, Jhamai M, Jonsson H, Stolk L, Thorleifsson G, Zhai G, Zhang F, Zhu Y, van der Breggen R, Carr A, Doherty M, Doherty S, Felson DT, Gonzalez A, Halldorsson BV, Hart DJ, Hauksson VB, Hofman A, Ioannidis JPA, Kloppenburg M, Lane NE, Loughlin J, Luyten FP, Nevitt MC, Parimi N, Pols HAP, van de Putte T, Rivadeneira F, Slagboom EP, Styrkarsdóttir U, Tsezou A, **Zmuda J**, Spector TD, Stefansson K, Uitterlinden AG, van Meurs JBJ. A Genome-Wide Association Study Identifies a Locus on Chromosome 7q22 to Influence Susceptibility for Osteoarthritis. *Arthritis & Rheumatism* 2010;62(2):499-510. PMC3354739
  92. Barbour KE, **Zmuda JM**, Boudreau R, Strotmeyer ES, Horwitz MJ, Evans RW, Gordon CL, Petit MA, Ensrud KE, Cauley JA for the Osteoporotic Fractures in Men (MrOS) Research Group. Correlates of Trabecular and Cortical Volumetric Bone Mineral Density at the Radius and Tibia of Older Men: The Osteoporotic Fractures in Men Study. *Journal of Bone and Mineral Research* 2010; 25(5):1017-28. PMC3153367
  93. Zhang Y, Kuipers AL, Yerges-Armstrong LM, Nestlerode CS, Jin Z, Wheeler VW, Patrick AL, Bunker CH, **Zmuda JM**. Functional and Association Analysis of Frizzled 1 (FZD1) Promoter Haplotypes with Femoral Neck Geometry. *Bone* 2010 Apr;46(4):1131-7. PMC2842476
  94. Bodnar LM, Catov JM, **Zmuda JM**, Cooper ME, Parrott MS, Roberts JM, Marazita ML, Simhan HN. Maternal Serum 25-hydroxyvitamin D Concentrations are Associated with Small-for-Gestational Age Births in White Women. *Journal of Nutrition* 2010 May;140(5):999-1006. PMC2855265
  95. \*Faulkner KA, Roth SM, Cauley JA, Stone K, Hillier TA, Ensrud KE, Hochberg M, Nevitt MC, **Zmuda JM**. Familial Resemblance and Shared Latent Familial Variance in Recurrent Fall-Risk in Older Women. *Journal of Applied Physiology* 2010 May;108(5):1142-7. PMC2867539
  96. \*Miljkovic I, Yerges LM, Kuller LH, Wang X, Kammerer CM, Nestlerode CS, Kuipers A, Bunker CH, Patrick AL, Wheeler VW, Evans RW, **Zmuda JM**. Association Analysis of 33 Lipoprotein Candidate Genes in Multi-generational Families of African Ancestry. *Journal of Lipid Research* 2010; 51(7):1823-31. PMC2882746
  97. Cousins JM, Petit MA, Paudel ML, Taylor BC, Hughes J, Cauley JA, **Zmuda JM**, Cawthon PM, Ensrud KE for The Osteoporotic Fractures In Men (Mros) Study Group. Muscle Power and Physical Activity are Associated with Bone Strength in Older Men: The Osteoporotic Fractures in Men Study. *Bone* 2010; 47(2):205-11. PMC3073372
  98. Kostek MC, Devaney JM, Gordish-Dressman H, Harris TB, Thompson PD, Clarkson PM, Angelopoulos TJ, Gordon PM, Moyna NM, Pescatello LS, Visich PS, Zoeller RF, Seip RL, Garcia M, Li R, **Zmuda JM**, Delmonico MJ, Kanaya A, Hoffman EP. A polymorphism near IGF1 is associated with body composition and muscle function in women from the Health, Aging, and Body Composition Study. *European Journal of Applied Physiology* 2010; 110(2):315-24. PMC2928925
  99. Rotman Y, Koh C, **Zmuda JM**, Kleiner DE, Sanyal AJ, Liang TJ. The Association of Genetic Variability in *PNPLA3* with Histological Severity of Non-Alcoholic Fatty Liver Disease. *Hepatology* 2010; 52(3):894-903. PMC2932770
  100. Andersson N, Strandberg L, Nilsson S, Adamovic S, Karlsson MK, Ljunggren Ö, Mellström D, Lane NE, **Zmuda JM**, Nielsen C, Orwoll E, Lorentzon M, Ohlsson C, Jansson J-O for the Osteoporotic Fractures in Men (MrOS) Research Group. A Variant near the Interleukin-6 Gene Is Associated with Fat Mass in Caucasian Men. *International Journal of Obesity (Lond)*. 2010; 34(6):1011-9. PMC2885503
  101. Beason TS, Bunker CH, **Zmuda JM**, Wilson JW, Patrick AL, Wheeler VW, Weissfeld JL. *ADRB2* Gene Variants, DEXA Body Composition, and Hypertension in Tobago men of African Descent. *Metabolism* 2010 Aug 18; [Epub ahead of print]. NIHMS223011; PMC2992095
-

102. \*Yerges-Armstrong LM, Miljkovic I, Cauley JA, Sheu Y, Gordon CL, Wheeler VW, Bunker CH, Patrick AL, **Zmuda JM**. Adipose Tissue and Volumetric Bone Mineral Density of Older Afro-Caribbean Men. *Journal of Bone and Mineral Research* 2010; 25(10):2221-8. PMC3119489
  103. Cauley JA, Blackwell T, Salamone L, **Zmuda JM**, Bauer DC, Fullman RL, Ensrud KE, Stone KL, Lang TF, Barrett-Connor E and Orwoll ES. Correlates of Trabecular and Cortical Volumetric Bone Mineral Density (vBMD) at the Femoral Neck and Lumbar Spine: The Osteoporotic Fractures in Men Study. *Journal of Bone and Mineral Research* 2010; 25(9):1958-71. PMC3727421
  104. Orwoll ES, Nielson CM, Labrie F, Barrett-Connor E, Cauley JA, Cummings SR, Ensrud K, Karlsson M, Lewis C, Patrick AL, Ljunggren O, Mellström D, Stefanick M, Yoshimura N, **Zmuda J**, Leung PC, Lau E, Vandenput L, Ohlsson C. Geographical and Racial Variation in Serum Sex Steroid Levels in Older Men. *Journal of Clinical Endocrinology and Metabolism* 2010 Oct; 95(10):E151-60. PMC3050097
  105. Nam H-S, Shin M-H, **Zmuda JM**, Leung PC, Lau EMC, Barrett-Connor E, Orwoll ES, Cauley JA for the Osteoporotic Fractures in Men (MrOS) Research Group. Race/Ethnic Differences in Bone Mineral Densities in Older Men. *Osteoporosis International* 2010 Dec; 21(12):2115-12. PMC2974925
  106. Lanktree MB, Guo Y, Murtaza M, Glessner JT, Bailey SD, Onland-Moret NC, Lettre G, Ongen H, Rajagopalan R, Johnson T, Shen H, Nelson CP, Klopp N, Baumert J, Padmanabhan S, Pankratz N, Pankow JS, Shah S, Taylor K, Barnard J, Peters BJ, Maloney C, Lobbmeyer MT, Stanton A, Zafarmand MH, Romaine SPR, Mehta A, van Iperen EPA, Gong Y, Price TS, Smith EN, Kim CE, Asselbergs FW, Atwood LD, Bailey KM, Bhatt D, Bauer F, Behr ER, Bhangale T, Boer JMA, Boehm BO, Bradfield JP, Brown M, Braund PS, Burton PR, Carty C, Chandrupatla HR, Chen W, Connell J, Dalgeorgou C, de Boer A, Drenos F, Elbers CC, Fang JC, Fox CS, Frackelton EC, Fuchs B, Gibson Q, Gieger C, Goel A, Grobbee DE, Hastie C, Howard PJ, Huang G-H, Johnson WC, Kleber MC, Kooperberg C, Ky B, LaCroix A, Lanken P, Lathrop M, Li M, Marshall V, Melander O, Mentch FD, Meyer N, Monda KL, Montpetit A, Murugesan G, Nakayama K, Nondahl D, Onipinla A, Rafelt S, Newhouse SJ, Otieno FG, Patel S, Putt ME, Rodriguez S, Safa RN, Sawyer DB, Schreiner PJ, Srinivasan SR, Sweitzer NK, Thomas KA, Thorand B, Tischfield S, Tobin M, Tomaszewski M, Verschuren WMM, Wallace C, Winkelmann B, Zhang H, Zheng D, Zhang L, **Zmuda JM**, Clarke R, Balmforth AJ, Danesh J, Day IN, Schork NJ, de Bakker PIW, Delle C, Duggan D, Hingorami AD, Hirschhorn JN, Hofker MH, Humphries SE, Kivimaki M, Lawlor DA, Kottke-Marchant K, Mega JL, Mitchell BD, Morrow DA, Palmen J, Redline S, Shields DC, Shuldiner AR, Sleiman PM, Smith GD, Farrall M, Jamshidi Y, Christiani DC, Hall AS, Doevendans PA, Christie J, Berenson GS, Murray SS, Illig T, Dorn II GW, Cappola TP, Boerwinkle E, Sever P, Rader DJ, Reilly MP, Caulfield M, Talmud PJ, Topol E, Engert JC, Wang K, Dominiczak An, Hamsten A, Silverstein RL, Lange LA, Sabatine MS, Wijmenga C, Trip M, Saleheen D, Peden JF, Cruickshanks KJ, Hilse A, O'Connell JR, Klungel OH, Maitland-van der Zee AH, Schadt EE, Johnson JA, Jarvik GP, Papanicolaou GJ, Watkins H on behalf of PROCARDIS, Grant SFA, Munroe PB, North KE, Samani NJ, Koenig W, Gaunt TR, Anand SS, van der Schouw YT, Kumari M on behalf of the Whitehall II Study and the WHII 50K Group, Soranzo N, FitzGerald GA, Reiner A, Hegele RA, Hakonarson H, Keating BJ. Meta-Analysis of Dense Gene-Centric Association Studies Reveals Common and Uncommon Variants Associated with Height. *American Journal of Human Genetics* 2011 Jan 7; 88(1):6-18. PMC3014369
  107. Sheu Y, **Zmuda JM**, Boudreau RM, Petit MA, Ensrud KE, Bauer DC, Gordon CL, Orwoll ES, Cauley JA. Bone Strength Measured by Peripheral Quantitative Computed Tomography and the Risk of Non-vertebral Fractures: The Osteoporotic Fractures in Men (MrOS) Study. *Journal of Bone and Mineral Research* 2011 Jan; 26(1):63-71. PMC3179319
  108. Newman AB, Glynn NW, Taylor CA, Sebastiani P, Perls TT, Mayeux R, Christensen K, **Zmuda J**, Barral S, Lee JH, Simonsick E, Walston J, Yashin A, Hadley EC. Health and Function of Participants in the Long Life Family Study: A Comparison With Other Cohorts. *Aging* (Albany, NY) 2011 Jan; 3(1)63-76. PMC3047140
-

109. \*Sheu Y, Cauley JA, Wheeler VW, Ensrud KE, Patrick AL, Bunker CH, Orwoll ES, **Zmuda JM** for the Osteoporotic Fractures in Men (MrOS) Research Group. Age-Related Decline in Bone Density among Ethnically Diverse Older Men. *Osteoporosis International* 2011 Feb; 22(2):599-605. PMC3106993
  110. Devaney JM, Gordish-Dressman H, Harmon BT, Bradbury MK, Devaney SA, Harris TB, Thompson PD, Clarkson PM, Price TB, Angelopoulos TJ, Gordon PM, Moyna NM, Pescatello LS, Visich PS, Zoeller RF, Seip RL, Seo J, Kim BH, Tosi LL, Garcia M, Li R, **Zmuda JM**, Delmonico MJ, Lindsay RS, Howard BV, Kraus WE, Hoffman EP. AKT1 Polymorphisms are Associated with Risk for Metabolic Syndrome. *Human Genetics* 2011 Feb; 129(2):129-39. PMC3020305
  111. **Zmuda JM**, Yerges LM, Moffett SP, Klei L, Kammerer CM, Roeder K, Cauley JA, Kuipers A, Ensrud KE, Nestlerode CS, Lewis C, Lang T, Barrett-Connor E, Hoffman AR, Ferrell RE, Orwoll ES for the MrOS Research Group. Genetic Analysis of Vertebral Trabecular Bone Density and Cross-Sectional Area in Older Men. *Osteoporosis International* 2011 Apr; 22(4):1079-90. PMC3691107
  112. Rariy CM, Ratcliffe SJ, Weinstein R, Bhasin S, Blackman MR, Cauley JA, Robbins J, **Zmuda JM**, Harris T, Fried LP, Cappola AR. Higher Serum Free Testosterone Concentration in Older Women is Associated with Greater Bone Mineral Density, Lean Body Mass and Total Fat Mass: The Cardiovascular Health Study. *Journal of Clinical Endocrinology and Metabolism* 2011 Apr; 96(4):989-96. PMC3070250
  113. Panoutsopoulou K, Southam L, Elliott KS, Rayner NW, Zhai G, Beazley C, Thorleifsson G, Arden NK, Carr A, Chapman K, Deloukas P, Doherty M, McCaskie A, Ollier WER, Ralston SH, Spector TD, Valdes AM, Wallis GA, Wilkinson JM, Arden E, Battley K, Blackburn H, Blanco FJ, Bumpstead S, Cupples LA, Day-Williams AG, Dixon K, Doherty SA, Esko T, Evangelou E, Felson D, Gomez-Reino JJ, Gonzalez A, Gordon A, Gwilliam R, Halldorsson BV, Hauksson BV, Hofman A, Hunt SSE, Ioannidis JPA, Ingvarsson T, Jonsdottir I, Jonsson H, Keen R, Kerkhof HJM, Kloppenburg MG, Koller N, Lakenberg N, Lane NE, Lee AT, Metspalu A, Meulenbelt I, Nevitt MC, O'Neill F, Parimi N, Potter SC, Rego-Perez I, Riancho JA, Sherburn K, Slagboom PE, Stefansson K, Styrkarsdottir U, Sumillera M, Swift D, Thorsteinsdottir U, Tsezou A, Uitterlinden AG, van Meurs JBJ, Watkins B, Wheeler M, Mitchell S, Zhu Y, **Zmuda JM**, arcOGEN Consortium, Zeggini E, Loughlin J. Insights Into the Genetic Architecture of Osteoarthritis from Stage 1 of the arcOGEN Study. *Annals of Rheumatic Diseases* 2011 May; 70(5):864-7. PMC3070286
-

114. [Schwartz AV](#), [Vittinghoff E](#), [Bauer DC](#), [Hillier TA](#), [Strotmeyer ES](#), [Ensrud KE](#), [Donaldson MG](#), [Cauley JA](#), [Harris TB](#), [Koster A](#), [Womack CR](#), [Palermo L](#), [Black DM](#); [Study of Osteoporotic Fractures \(SOF\) Research Group](#); [Osteoporotic Fractures in Men \(MrOS\) Research Group](#); [Health, Aging, and Body Composition \(Health ABC\) Research Group](#); [Cummings SR](#), [Nevitt MC](#), [Bauer DC](#), [Black DM](#), [Stone KL](#), [Browner W](#), [Benard R](#), [Blackwell T](#), [Cawthon PM](#), [Concepcion L](#), [Dockrell M](#), [Ewing S](#), [Farrell M](#), [Fox C](#), [Fullman R](#), [Harrison SL](#), [Jaime-Chavez M](#), [Liu W](#), [Lui L](#), [Palermo L](#), [Parimi N](#), [Rahorst M](#), [Kriesel D](#), [Schambach C](#), [Scott R](#), [Ziaro J](#), [Hochberg MC](#), [Nichols R](#), [Link S](#), [Ensrud KE](#), [Diem S](#), [Homan M](#), [Van Coevering P](#), [Fillhouer S](#), [Nelson N](#), [Moen K](#), [Imker-Witte F](#), [Jacobson K](#), [Slindee M](#), [Gran R](#), [Forseth M](#), [Andrews R](#), [Bowie C](#), [Muehlbauer N](#), [Luthi S](#), [Atchison K](#), [Cauley JA](#), [Kuller LH](#), **Zmuda JM**, [Harper L](#), [Buck L](#), [Danielson M](#), [Bashada C](#), [Cusick D](#), [Flaugh A](#), [Gorecki M](#), [Nasim M](#), [Newman C](#), [Watson N](#), [Hillier T](#), [Vesco K](#), [Pedula K](#), [Van Marter J](#), [Summer M](#), [MacFarlane A](#), [Rizzo J](#), [Snider K](#), [Wallace J](#), [Cummings SR](#), [Bauer DC](#), [Black DM](#), [Cawthon PM](#), [Nevitt MC](#), [Stone KL](#), [Fullman R](#), [Benard R](#), [Blackwell T](#), [Chau A](#), [Christianson L](#), [Concepcion L](#), [Diehl J](#), [Ewing S](#), [Farrell M](#), [Fox C](#), [Hoffland S](#), [Ireland J](#), [Jaime-Chavez M](#), [Kwan E](#), [Harrison SL](#), [Liu W](#), [Lui LY](#), [Mills A](#), [Nusgarten L](#), [Palermo L](#), [Parimi N](#), [Perreault L](#), [Schneider J](#), [Scott R](#), [Tanaka D](#), [Yeung C](#), [Orwoll E](#), [Phipps K](#), [Marshall L](#), [Babich Blank J](#), [Lambert L](#), [Nielson C](#), [Wang Y](#), [Petersen C](#), [Powell M](#), [Lewis CE](#), [Shikany J](#), [Johnson P](#), [Webb N](#), [Hardy K](#), [Felder S](#), [Wilkoff J](#), [King J](#), [Johnsey T](#), [Young M](#), [Atkins C](#), [Collier C](#), [Smith J](#), [Sassaman C](#), [Ensrud K](#), [Fink H](#), [Nelson N](#), [Van Coevering P](#), [Fillhouer S](#), [Andrews R](#), [Bowie C](#), [Forseth M](#), [Gran R](#), [Imker-Witte F](#), [Luthi S](#), [Moen K](#), [Muehlbauer N](#), [Paudel M](#), [Slindee M](#), [Ziesche S](#), [Stefanick M](#), [Hoffman A](#), [Kent K](#), [Ellsworth N](#), [Krauss A](#), [Gupta R](#), [Hartley S](#), [Bowers M](#), [Cauley J](#), **Zmuda J**, [Danielson M](#), [Harper L](#), [Buck L](#), [Nasim M](#), [Cusick D](#), [Gorecki M](#), [Watson N](#), [Bashada C](#), [Newman C](#), [Barrett-Connor E](#), [Dam T](#), [Carrion-Petersen ML](#), [Miller P](#), [Kamantigue N](#), [Marksbury K](#), [Stephens M](#), [Torres Z](#), [Newman AB](#), [Kost P](#), [Satterfield S](#), [Tylavsky FA](#), [Kritchevsky SB](#), [Thomas S](#), [Cummings SR](#), [Nevitt MC](#), [Rubin SM](#), [Harris TB](#), [Garcia ME](#). Association of BMD and FRAX Score with Risk of Fracture in Older Adults with Type 2 Diabetes. *JAMA* 2011 June 1; 305(21):2184-92. PMC3287389
115. Manini TM, Patel KV, Bauer DC, Ziv E, Schoeller DA, Mackey DC, Li R, Newman AB, Nalls M, **Zmuda JM**, Harris TB for the Health, Aging and Body Composition Study. European Ancestry and Resting Metabolic Rate in Older African Americans. *European Journal of Clinical Nutrition* 2011 Jun; 65(6):663-7. PMC Journal – In process
116. Okobia MN, **Zmuda JM**, Ferrell RE, Patrick AL, Bunker CH. Chromosome 8q24 Variants are Associated with Prostate Cancer Risk in a High Risk Population of African Ancestry. *The Prostate* 2011 Jul; 71(10):1054-63. PMID: 21557270; [PMC Journal – In Process]
117. Barbour KE, **Zmuda JM**, Boudreau R, Strotmeyer ES, Horwitz MJ, Evans RW, Kanaya AM, Harris TB, Bauer DC, Cauley JA. Adipokines and the Risk of Fracture in Older Adults. *Journal of Bone and Mineral Research* 2011 Jul; 26(7):1568-76. PMC3733555
118. \*Miljkovic I, Cauley JA, Dressen AS, Gordon CL, Goodpaster BH, Kuller LH, Bunker CH, Patrick AL, Wheeler VW, Orwoll ES, **Zmuda JM**. Bioactive Androgens and Glucuronidated Androgen Metabolites are Associated with Skeletal Muscle Fat Distribution among Older Black Men. *Metabolism* 2011 Aug; 60(8):1178-85. PMC3106138
119. \*Miljkovic I, Kuipers AL, Kammerer CM, Wang X, Bunker CH, Patrick AL, Wheeler VW, Kuller LH, Evans RW, **Zmuda JM**. Markers of Inflammation are Heritable and Associated with Subcutaneous and Ectopic Skeletal Muscle Adiposity in African Ancestry Families. *Metab Syndr Relat Disord* 2011 Aug; 9(4):319-26. PMC3142634
120. Barbour KE, **Zmuda JM**, Horwitz MJ, Strotmeyer ES, Boudreau R, Evans RW, Ensrud KE, Gordon CL, Petit MA, Patrick AL, Cauley JA. The Association between Serum 25-Hydroxyvitamin D and Indices of Bone Strength in Caucasian and African Ancestry Men. *Osteoporosis International* 2011 Sep; 22(9):2475-85. PMC3539808
-

121. Nielson CM, **Zmuda JM**, Carlos AS, Wagoner WJ, Larson EA, Orwoll ES, Klein RF. Rare Coding Variants in *ALPL* Are Associated with Low Serum Alkaline Phosphatase and Low Bone Mineral Density in Humans and Mice. *Journal of Bone and Mineral Research* 2012 Jan; 27(1):93-103. PMC3810303
122. N'Diaye A, Chen G, Palmer C, Bing G, Tayo B, Mathias R, Ding J, Nalls M, Adeyemo A, Adoue V, Ambrosone C, Atwood L, Bandera E, Becker L, Berndt S, Berstein L, Blot W, Boerwinkle E, Britton A, Casey G, Chanock S, Demerath E, Deming S, Diver R, Fox C, Harris T, Hernandez D, Hu J, Ingles S, John E, Johnson C, Keating B, Kittles R, Kolonel L, Kritchevsky S, LeMarchand L, Lohman K, Liu J, Millikan R, Murphy A, Musani S, Neslund-Dudas C, North K, Nyante S, Ogunniyi A, Ostrander E, Papanicolaou G, Patel S, Pettaway C, Press M, Redline S, Rodriguez-Gil J, Rotimi C, Rybicki B, Salako B, Schreiner P, Signorello L, Singleton A, Stanford J, Stram A, Stram D, Strom S, Suktitipat B, Thun M, Witte J, Yanek L, Ziegler R, Zheng W, Zhu X, **Zmuda J**, Zonderman A, Evans M, Liu Y, Becker D, Cooper R, Pastinen T, Henderson B, Hirschhorn J, Guillaume L, Haiman C. Identification, Replication, and Fine-mapping of Loci Associated with Adult Height in Individuals of African Ancestry. *Plos Genetics* 2011 Nov; 7(11). doi: 10.1371/annotation/58c67154-3f10-4155-9085-dcd6e3689008. Epub 2011 Nov 21. PMC3227698
123. \*Miljkovic I, Bodnar LM, Cauley JA, Bunker CH, Patrick AL, Wheeler VW, Kuller LH, **Zmuda JM**. Low prevalence of vitamin D deficiency in elderly Afro-Caribbean men. *Ethnicity and Disease* 2011 Winter; 21(1):79-84. PMC3095488.
124. Swarbrick MM, Evans DS, Valle MI, Favre H, Wu S-H, Njajou OT, Li R, **Zmuda JM**, Miljkovic-Gacic I, Harris TB, Kwok P-Y, Vaisse C, Hsueh W-C. Replication and Extension of Association between Common Genetic variants in *SIM1* and Human adiposity. *Obesity* 2011 Dec;19(12):2394-403. PMID: 21512513 [PubMed-in process]
125. Saxena R, Elbers CC, Guo Y, Peter I, Gaunt TR, Mega JL, Lanktree MB, Tare A, Castillo BA, Li YR, Johnson T, Bruinenberg M, Gilbert-Diamond D, Rajagopalan R, Voight BF, Balasubramanyam A, Barnard J, Bauer F, Baumert J, Bhangale T, Böhm BO, Braund PS, Burton PR, Chandrupatla HR, Clarke R, Cooper-Dehoff RM, Crook ED, Davey-Smith G, Day IN, de Boer A, de Groot MC, Drenos F, Ferguson J, Fox CS, Furlong CE, Gibson Q, Gieger C, Gilhuijs-Pederson LA, Glessner JT, Goel A, Gong Y, Grant SF, Grobbee DE, Hastie C, Humphries SE, Kim CE, Kivimaki M, Kleber M, Meisinger C, Kumari M, Langae TY, Lawlor DA, Li M, Lobbmeyer MT, Maitland-van der Zee AH, Meijs MF, Molony CM, Morrow DA, Murugesan G, Musani SK, Nelson CP, Newhouse SJ, O'Connell JR, Padmanabhan S, Palmen J, Patel SR, Pepine CJ, Pettinger M, Price TS, Rafelt S, Ranchalis J, Rasheed A, Rosenthal E, Ruczinski I, Shah S, Shen H, Silbernagel G, Smith EN, Spijkerman AW, Stanton A, Steffes MW, Thorand B, Trip M, van der Harst P, van der A DL, van Iperen EP, van Setten J, van Vliet-Ostaptchouk JV, Verweij N, Wolfenbuttel BH, Young T, Zafarmand MH, **Zmuda JM**; the Look AHEAD Research Group; DIAGRAM consortium, Boehnke M, Altshuler D, McCarthy M, Kao WH, Pankow JS, Cappola TP, Caulfield M, Dominiczak A, Shields DC, Bhatt D, Zhang L, Curtis SP, Danesh J, Casas JP, van der Schouw YT, Onland-Moret NC, Doevendans PA, Dorn GW 2nd, Farrall M, Fitzgerald GA, Hamsten A, Hegele R, Hingorani AD, Hofker MH, Huggins GS, Illig T, Jarvik GP, Johnson JA, Klungel OH, Knowler WC, Koenig W, März W, Meigs JB, Melander O, Munroe PB, Mitchell BD, Bielinski SJ, Rader DJ, Reilly MP, Rich SS, Rotter JI, Saleheen D, Samani NJ, Schadt EE, Shuldiner AR, Silverstein R, Kottke-Marchant K, Talmud PJ, Watkins H, Asselbergs F, de Bakker PI, McCaffery J, Wijmenga C, Sabatine MS, Wilson JG, Reiner A, Bowden DW, Hakonarson H, Siscovick DS, Keating BJ. Large-Scale Gene-Centric Meta-Analysis across 39 studies Identified Type 2 Diabetes Loci. *American Journal of Human Genetics* 2012; 90(3):410-25. PMC3309185
-

126. Wang X, Sanyal A, Cawthon PM, Palermo L, Jekir M, Christensen J, Ensrud KE, Cummings SR, Orwoll E, Black DM, [Bauer DC](#), [Nevitt MC](#), [Stone KL](#), [Fullman R](#), [Benard R](#), [Blackwell T](#), [Chau A](#), [Christianson L](#), [Concepcion L](#), [Diehl J](#), [Ewing S](#), [Farrell M](#), [Fox C](#), [Hoffland S](#), [Ireland J](#), [Jaime-Chavez M](#), [Kwan E](#), [Harrison SL](#), [Liu W](#), [Lui LY](#), [Mills A](#), [Navy C](#), [Nusgarten L](#), [Palermo L](#), [Parimi N](#), [Perreault L](#), [Peters K](#), [Rahorst M](#), [Schafer CA](#), [Schambach](#), [Schneider J](#), [Scott R](#), [Tanaka D](#), [Yeung C](#), [Orwoll E](#), [Lapidus J](#), [Lee C](#), [Pedersen C](#), [Abrahamson M](#), [Masterfield L](#), [Nielson C](#), [Wang Y](#), [Shrestha S](#), [Shikany J](#), [Lewis CE](#), [Johnson P](#), [Young M](#), [Webb N](#), [Felder S](#), [King J](#), [Johnsey T](#), [Collier C](#), [Hardy K](#), [Smith J](#), [Anderson S](#), [Ensrud K](#), [Fink H](#), [Nelson N](#), [Van Coevering P](#), [Fillhouer S](#), [Andrews R](#), [Forseth M](#), [Jacobson RK](#), [Luthi S](#), [Moen K](#), [Paudel M](#), [Stefanick M](#), [Hoffman A](#), [Ellsworth N](#), [Kent K](#), [Belding S](#), [Krauss A](#), [Cauley J](#), **Zmuda J**, [Danielson M](#), [Harper L](#), [Buck L](#), [Cusick D](#), [Gorecki M](#), [Newman C](#), [Barrett-Connor E](#), [Dam T](#), [Carrion-Petersen ML](#), [Miller P](#), [Kamantigue N](#), [Marksbury Jappe K](#), [Stephens M](#); Osteoporotic Fractures in Men (MrOS) Research Group, Keaveny TM. Prediction of New Clinical Vertebral Fractures in Elderly Men Using Finite Element Analysis of CT Scans. *Journal of Bone and Mineral Research* 2012; 27(4):808-16. PMC3510751
  127. \*Kuipers AL, Gundberg C, Kammerer CM, Dressen AS, Nestlerode CS, Patrick AL, Wheeler VW, Bunker CH, Newman AB, **Zmuda JM**. Genetic Analysis of Serum Osteocalcin in Multigenerational Afro-Caribbean Families. *Osteoporosis International* 2012 May; 23(5):1521-31. PMC3768139
  128. Forrest K, Bunker CH, Sheu Y, Wheeler V, Patrick AL, **Zmuda JM**. Patterns and Correlates of Grip Strength Change with Age in Afro-Caribbean Men. *Age and Aging* 2012 May; 41(3):326-32. PMC3335373
  129. Barbour KE, **Zmuda JM**, Boudreau R, Strotmeyer ES, Horwitz MJ, Evans RW, Kanaya AM, Harris TB, Cauley JA for the Health ABC study. The Effects of Adiponectin and Leptin on Changes in Bone Mineral Density of the Hip. *Osteoporosis International* 2012 Jun; 23(6):1699-1710. PMC3536828
  130. Aldrich MC, Kumar R, Colangelo LA, Williams LK, Sen S, Kritchevsky SB, Meibohm B, Galanter J, Hu D, Gignoux CR, Liu Y, Harris TB, Ziv E, **Zmuda JM**, Garcia M, Leak TS, Foreman MG, Smith LJ, Fornage M, Liu K, Burchard EG for the Health ABC and CARDIA Studies. Genetic Ancestry-Smoking Interactions and Lung Function in African Americans: A Cohort Study. *PLoS ONE* 2012; 76:e39541. PMC3380861
  131. Ng MCY, Saxena R, Li J, Palmer ND, Dimitrov L, Xu J, Rasmussen-Torvik LJ, **Zmuda JM**, Siscovick DS, Patel SR, Crook ED, Sims M, Chen YDI, Bertoni A, Li M, Grant SFA, Fox C, Dupuis J, Meigs J, Psaty BM, Pankow JS, Langfeld C, Freedman B, Rotter JI, Wilson JG, Bowden DW. Transferability and Fine Mapping of Type 2 Diabetes Loci in African Americans: The Candidate Gene Association Resource Plus Study. *Diabetes* 2013;62(3):965-76. PMC3581206
  132. Waring AC, Harrison S, Fink HA, Samuels MH, Cawthon PM, **Zmuda JM**, Orwoll ES. A Prospective Study of Thyroid Function, Bone Loss, and Fracture in Older Men: The MrOS Study. *Journal of Bone and Mineral Research* 2013 Mar; 28(3):472-9. PMID: 23018684 [PubMed-in process]
-

133. Guo Y, Lanktree MB, Taylor KC, Fairfax BP, Elbers CC, Barnard J, Farrall M, Padmanabhan S, Baumert J, Almoguera Castillo B, Gaunt TR, Gong Y, Rajagopalan R, Romaine SPR, Kumari M, Rafelt S, Smith EN, Li YR, Sivapalaratnam S, van Iperen EPA, Speliotes EK, Toskala E, Zhang L, Ochs-Balcom HM, Bhangale TR, Chandrupatla HR, Drenos F, Gieger C, Gupta J, Johnson T, Kleber ME, Makino S, Mangino M, Meng Y, Nelson CP, Pankow JS, Pankratz N, Price TS, Shaffer J, Shen H, Tischfield S, Tomaszewski M, Atwood LD, Bailey KM, Balasubramanyam A, Baldwin CT, Basart H, Bauer F, Behr ER, Beitelshes AL, Berenson GS, Beresford SAA, Bezzina CR, Bhatt DL, Boer JMA, Braund PS, Burke GL, Burkley B, Carty C, Chen W, Clarke R, Cooper-DeHoff RM, Curtis SP, de Bakker PIW, de Jong JS, Delles C, Dominiczak AF, Duggan D, Feldman HI, Furlong CE, Gorski MM, Gums JG, Hardwick R, Hastie C, Heid IM, Huang G-H, Huggins GS, Humphries SE, Kirkland SA, Kivimaki M, Klein R, Klein BE, Knowler WC, Kottke-Marchant K, LaCroix AZ, Langaee TY, Li M, Lyon HN, Maiwald S, Marshall JK, Mehta A, Meijs MFL, Melander O, Meyer N, Mitra N, Molony CM, Morrow DA, Murugesan G, Newhouse SJ, Nieto JF, Onland-Moret NC, Ouwehand WH, Palmen J, Pepine CJ, Ranchalis J, Rosas SE, Rosenthal EZ, Scharnagl H, Schork NJ, Schreiner PJ, Shah T, Shashaty M, Shimbo D, Srinivasan SR, Thomas F, Tobin MD, Tsai MY, Verschuren WMM, Wagenknecht LE, Winkelmann B, Yung T, Yusuf S, Zafarmand MH, **Zmuda JM**, Zwinderman AH, Anand SS, Balmforth AJ, Boehm BO, Boerwinkle E, Burton P, Cappola TP, Casas JP, Caulfield MJ, Christiani DC, Christie J, Cruickshanks KJ, Davey-Smith G, Davidson KW, Day IN, Doevendans PA, Dorn II GW, FitzGerald GA, Hall AS, Hingorani AD, Hirschhorn JN, Hofker MH, Hovingh KG, Illig T, Jamshidi Y, Jarvik GP, Johnson JA, Kanetsky PA, Kastelein JJP, Koenig W, Lawlor DA, März W, McCaffery J, Mega JL, Mitchell BD, Murray SS, O'Connell JR, Patel SR, Peters An, Pettinger M, Rader DJ, Redline S, Reilly MP, Sabatine MS, Schadt EE, Shuldiner AR, Silverstein RL, Spector TD, Taylor HA, Thorand B, Trip MD, Watkins H, Wichmann H-E, Fox CS, Grant SFA, Peter I, Talmud PJ, Munroe PB, Wilson JG, Knight JC, Samani NJ, Hegele RA, Asselbergs FW, Monda KL, van der Schouw YT, Demerath EW, Wijmenga C, Timpson NJ, Reiner AP, North KE, Papanicolaou GJ, Hakonarson H, Lange LA, Keating BJ. Gene-centric Meta-analysis of 108,912 Individuals Confirm Known Body Mass Index Loci and Reveal Three Novel Signals. The IBC 50K SNP array BMI Consortium. *Human Molecular Genetics* 2013; 22(1):184-201. PMC3522401
134. Liu C-T, Ng MCY, Rybin D, Adeyemo A, Bielinski SJ, Boerwinkle E, Borecki I, Cade B, Chen YDI, Djousse L, Fornage M, Goodzari MO, Grant SFA, Grimbsby J, Guo X, Harris T, Jensen R, Kabagambe E, Kizer J, Liu Y, Mukamal K, Nettleton J, Pankow J, Parekh R, Patel SR, Ramos E, Rasmussen-Torvik L, Rich SS, Rotimi C, Sarpong D, Shriner D, Sims M, **Zmuda JM**, Redline S, Kao L, Siscovick D, Florez JC, Rotter JI, Dupuis J, Wilson JG, Bowden DW, Meigs JB. Transferability and Fine-Mapping of Glucose and Insulin Quantitative Trait Loci across Populations: CARE, the Candidate Gene Association Resource. *Diabetologia* 2012 Nov; 55(11):2970-84. PMC3804308
135. [Cummings SR](#), [Nevitt MC](#), [Bauer DC](#), [Stone KL](#), [Black DM](#), [Cawthon PM](#), [Fullman R](#), [Benard R](#), [Blackwell T](#), [Diehl J](#), [Ewing S](#), [Fox C](#), [Jaime-Chavez M](#), [Kwan E](#), [Litwack S](#), [Lui LY](#), [Mills A](#), [Palermo L](#), [Schneider J](#), [Scott R](#), [Tanaka D](#), [Yeung C](#), [Orwoll E](#), [Marshall L](#), [Babich Blank J](#), [Lambert L](#), [Chan B](#), [Neevel D](#), [Mougey J](#), [Press L](#), [Lewis CE](#), [Shikany J](#), [Johnson P](#), [Clavino E](#), [Oden C](#), [Webb N](#), [Hardy K](#), [Felder S](#), [Grayson P](#), [Wilkoff J](#), [King J](#), [Johnsey T](#), [Thompson J](#), [Ensrud K](#), [Fink H](#), [King D](#), [Michaels N](#), [Nelson N](#), [Bird C](#), [Blanks D](#), [Imker-Witte F](#), [Moen K](#), [Paudel M](#), [Slindee M](#), [Stefanick M](#), [Hoffman A](#), [Moore E](#), [Kent K](#), [Malig B](#), [Wong S](#), [Cauley J](#), **Zmuda J**, [Danielson M](#), [Harper L](#), [Buck L](#), [Nasim M](#), [Cusick D](#), [Moore D](#), [Gorecki M](#), [Lee D](#), [Watson N](#), [Bashada C](#), [Newman C](#), [Engleka G](#), [Barrett-Connor E](#), [Dam T](#), [Carrion-Petersen ML](#), [Miller P](#), [Kamantigue N](#), [Szerdi S](#), [Reno G](#). Relationships Between Serum and Urine Phosphorus with All-cause and Cardiovascular Mortality: the Osteoporotic Fractures in Men (MrOS) Study. *American Journal of Kidney Disease* 2013 Apr; 61(4): 555-63. PMC3815620
136. Nam H-S, Kweon SS, Choi JS, **Zmuda JM**, Leung PC, Yu L, Hillier T, Hill DD, Patrick AL, Cauley JA. Racial/Ethnic Differences in Bone Mineral Density Among Older Women. *Journal of Bone and Mineral Metabolism* 2013 Mar; 31(2):190-8. PMID: 23143509. [PubMed-in process].
-



137. Monda KL, Chen GK, Taylor KC, Palmer C, Edwards TL, Lange LA, Ng MC, Adeyemo AA, Allison MA, Bielak LF, Chen G, Graff M, Irvin MR, Rhie SK, Li G, Liu Y, Liu Y, Lu Y, Nalls MA, Sun YV, Wojczynski MK, Yanek LR, Aldrich MC, Ademola A, Amos CI, Bandera EV, Bock CH, Britton A, Broeckel U, Cai Q, Caporaso NE, Carlson CS, Carpten J, Casey G, Chen WM, Chen F, Chen YD, Chiang CW, Coetsee GA, Demerath E, Deming-Halverson SL, Driver RW, Dubbert P, Feitosa MF, Feng Y, Freedman BI, Gillanders EM, Gottesman O, Guo X, Haritunians T, Harris T, Harris CC, Hennis AJ, Hernandez DG, McNeill LH, Howard TD, Howard BV, Howard VJ, Johnson KC, Kang SJ, Keating BJ, Kolb S, Kuller LH, Kutlar A, Langefeld CD, Lettre G, Lohman K, Lotay V, Lyon H, Manson JE, Maixner W, Meng YA, Monroe KR, Morhason-Bello I, Murphy AB, Mychaleckyj JC, Nadukuru R, Nathanson KL, Nayak U, N'diaye A, Nemesure B, Wu SY, Leske MC, Neslund-Dudas C, Neuhauser M, Nyante S, Ochs-Balcom H, Ogunniyi A, Ogundiran TO, Ojengbode O, Olopade OI, Palmer JR, Ruiz-Narvaez EA, Palmer ND, Press MF, Rampsaud E, Rasmussen-Torvik LJ, Rodriguez-Gil JL, Salako B, Schadt EE, Schwartz AG, Shriner DA, Siscovick D, Smith SB, Wassertheil-Smoller S, Speliotes EK, Spitz MR, Sucheston L, Taylor H, Tayo BO, Tucker MA, Van Den Berg DJ, Edwards DR, Wang Z, Wiencke JK, Winkler TW, Witte JS, Wrensch M, Wu X, Yang JJ, Levin AM, Young TR, Zakai NA, Cushman M, Zanetti KA, Zhao JH, Zhao W, Zheng Y, Zhou J, Ziegler RG, **Zmuda JM**, Fernandes JK, Gilkeson GS, Kamen DL, Hunt KJ, Spruill IJ, Ambrosone CB, Ambs S, Arnett DK, Atwood L, Becker DM, Berndt SI, Bernstein L, Blot WJ, Borecki IB, Bottinger EP, Bowden DW, Burke G, Chanock SJ, Cooper RS, Ding J, Duggan D, Evans MK, Fox C, Garvey WT, Bradfield JP, Hakonarson H, Grant SF, Hsing A, Chu L, Hu JJ, Huo D, Ingles SA, John EM, Jordan JM, Kabagambe EK, Kardia SL, Kittles RA, Goodman PJ, Klein EA, Kolonel LN, Le Marchand L, Liu S, McKnight B, Millikan RC, Mosley TH, Padhukasahasram B, Williams LK, Patel SR, Peters U, Pettaway CA, Peyser PA, Psaty BM, Redline S, Rotimi CN, Rybicki BA, Sale MM, Schreiner PJ, Signorello LB, Singleton AB, Stanford JL, Strom SS, Thun MJ, Vitolins M, Zheng W, Moore JH, Williams SM, Ketkar S, Zhu X, Zonderman AB; NABEC Consortium; UKBEC Consortium; BioBank Japan Project; AGEN Consortium, Kooperberg C, Papanicolaou GJ, Henderson BE, Reiner AP, Hirschhorn JN, Loos RJ, North KE, Haiman CA. A Meta-Analysis Identifies New Loci Associated with Body Mass Index in Individuals of African Ancestry. *Nature Genetics* 2013 Jun; 45(6):690-6. PMC3694490
138. \*Kuipers AL, **Zmuda JM**, Carr JJ, Terry JG, Patrick AL, Ge Y, Hightower RC, Bunker CH, Miljkovic I. Association of Volumetric Bone Mineral Density with Abdominal Aortic Calcification in African Ancestry Men. *Osteoporosis International* 2013 Aug 22 [Epub ahead of print]. PMC3945719
139. \*Kuipers AL, Kammerer CM, Miljkovic I, Dressen AS, Woodard GA, Bunker CH, Patrick AL, Wheeler VW, Newman AB, Sutton-Tyrrell K, **Zmuda JM**. Evidence for a Genetic Link Between Bone and Vascular Measures in African Ancestry Families. *Journal of Bone and Mineral Research* 2013 Aug; 28(8):1804-10. PMC3720825
140. Miljkovic I, Kuipers AL, Kuller LH, Sheu Y, Bunker CB, Patrick AL, Wheeler VW, Evans RW, **Zmuda JM**. Skeletal Muscle Adiposity is Associated with Serum Lipid and Lipoprotein Levels in Afro-Caribbean Men. *Obesity* 2013 Sep; 21(9):1900-7. PMC3748155
141. Li H, Bunker CH, Patrick AL, Kuller LH, Kammerer CM, Miljkovic I, Wheeler V, **Zmuda JM**. Heritability of Kidney Function Biomarkers in Afro-Caribbean Families. *Ethnicity & Disease* 2013 (In Press).
142. Yu S, Yerges-Armstrong LM, Chu Y, **Zmuda JM**, Zhang Y. E2F1 Effects on Osteoblast Differentiation and Mineralization are Mediated Through Upregulation of Frizzled-1. *Bone* 2013 Oct; 56(2):234-41. PMC3758927
143. \*Kuipers AL, Kammerer CM, Miljkovic I, Woodard GA, Dressen AS, Li H, Bunker CH, Patrick AL, Wheeler VW, Newman AB, Sutton-Tyrrell K, **Zmuda JM**. Genetic Epidemiology and Genome-Wide Linkage Analysis of Carotid Artery Ultrasound Traits in Multigenerational African Ancestry Families. *Atherosclerosis* 2013 Nov; 231(1):120-3. PMC3837479
-

144. Sheu Y, Cauley JA, Patrick AL, Wheeler VW, Bunker CH, **Zmuda JM**. Risk Factors for Fracture in Middle- and Older-aged Men of African Descent. *Journal of Bone and Mineral Research* 2014 Jan; 29(1):234-41. PMID: 23775783 [PubMed–in process]
145. Shin M-H, **Zmuda JM**, Barrett-Connor E, Sheu Y, Patrick AL, Leung PC, Kwok A, Kweon S-S, Nam H-S, Cauley JA. Race/Ethnic Differences in Associations Between Bone Mineral Density and Fracture History in Older Men. *Osteoporosis International* 2014 Mar; 25(3):837-34. PMID: 24146094 [PubMed–in process]
146. \*Kuipers AL, Zhang Y, Yu S, Kammerer CM, Nestlerode CS, Chu Y, Bunker CH, Patrick AL, Wheeler VW, Miljkovic I, **Zmuda JM**. Relative Influence of Heritability, Environment and Genetics on Serum Sclerostin. *Osteoporosis International* 2014 Mar; 25(3):905-12. PMC3948173
147. Moayyeri A, Hsu Y-H, Karasik D, Estrada K, Xiao S-M, Nielson C, Srikanth P, Giroux S, Wilson SG, Zheng H-F, Smith AV, Pye SR, Leo PJ, Teumer A, Hwang J-Y, Ohlsson C, McGuigan F, Minster RL, Hayward C, Olmos JM, Lyytikäinen L-P, Lewis JR, Swart KMA, Masi L, Oldmeadow C, Holliday EG, Cheng S, van Schoor NM, Harvey NC, Kruk M, Del Greco M F, Igl W, Trummer O, Grigoriou E, Luben R, Liu C-T, Zhou Y, Oei L, Medina-Gomez C, **Zmuda J**, Tranah G, Brown SJ, Williams FM, Soranzo N, Jakobsdottir J, Siggeirsdottir K, Holliday KL, Hannemann A, Go MJ, Garcia M, Polasek O, Laaksonen M, Zhu K, Enneman AW, McEvoy M, Peel R, Sham PK, Jaworski M, Johansson A, Hicks AA, Pludowski P, Scott R, Dhonukshe-Rutten RAM, van der Velde N, Kähönen M, Viikari JS, Sievänen H, Raitakari OT, González-Macías J, Hernández JL, Mellström D, Ljunggren O, Cho YS, Völker U, Nauck M, Homuth G, Völzke H, Haring R, Brown MA, McCloskey E, Nicholson GC, Eastell R, Eisman JA, Jones G, Reid IR, Dennison EM, Wark J, Boonen S, Vanderschueren D, Wu FCW, Aspelund T, Richards JB, Bauer D, Hofman A, Khaw K-T, Dedoussis G, Obermayer-Pietsch B, Gyllenstein U, Pramstaller PP, Lorenc RS, Cooper C, Kung AWC, Lips P, Alen M, Attia J, Brandi ML, de Groot L CPGM, Lehtimäki T, Riancho JA, Campbell H, Liu Y, Harris TB, Akesson K, Karlsson M, Lee J-Y, Wallaschofski H, Duncan EL, O'Neill TW, Gudnason V, Spector TD, Rousseau F, Orwoll E, Cummings S, Wareham NJ, Rivadeneira F, Uitterlinden AG, Prince RL, Kiel DP, Reeve J, Kaptoge SK. Genetic Determinants of Heel Bone Properties: Genome-wide Association Meta-analysis and Replication in the GEFOS/GENOMOS Consortium. *Human Molecular Genetics* 2014 Jan [e-Pub ahead of print]. PMID: 24430505

## D. Research Support

### Ongoing Research Support

R01-AG033618 J. Zmuda (PI) 09/01/10-08/30/13 (no cost extension)

NIA

*Wnt Genes and Skeletal Aging: From the Population to the Cell*

This proposal examines genetic variation in Wnt pathway related genes and bone mineral density in older Caucasian and African Ancestry men. Functional studies of promising variants will be completed in osteoblastic cells *in vitro*.

Role: Principal Investigator

R01-AR049747-06 J. Zmuda (PI) 09/01/2010 - 08/31/2015

NIAMS

*Epidemiology of Bone Loss in African Men*

This proposal continues our Tobago Bone Health Study, a population-based study of bone mineral density in men of African ancestry aged 40-92 years. Men are recontacted for a second round of peripheral computed tomography exams of the radius and tibia, with an average of 5 years of follow-up. Bone density is remeasured to describe the rates and determinants of trabecular and cortical bone loss.

Role: Principal Investigator

U01 AR045654-10 J. Cauley (PI) 08/01/2006 - 07/31/2012 (no cost extension)

NIAMS

*Osteoporotic Fractures in Men - MrOS Renewal - Pittsburgh*

This is the renewal of a study to quantify the determinants of osteoporosis and fracture in elderly men.

Role: Co-Investigator

U01 AG023744-06

A. Newman (PI)

07/01/2010 - 06/30/2013 (no cost extension)

NIA

*Families of Cohort Survivors Over 90 - Study Center*

Older adults aged 90+, their siblings and children of the index generation are phenotyped for important exceptional survival phenotypes. Genome wide association, linkage and whole exome sequencing will be completed to identify genetic determinants of longevity and successful aging related phenotypes.

Role: Co-Investigator

R01 HD056999

NICHD

L. Bodnar (PI)

09/01/2008-08/31/2013 (no cost extension)

*Vitamin D: A Link to Racial Disparities in Birth Outcomes*

This project examines the role of vitamin D levels and candidate genes in relationship to birth outcomes including preeclampsia and spontaneous preterm birth among racial/ethnic population subgroups.

Role: Co-Investigator

**Completed Research Support (selected)**

N01-AG-6-2101

A, Newman (PI)

06/01/2004 - 11/15/2007

NIA

*Dynamics of Health, Aging, and Body Composition*

This project examined the incidence of physical disability in relation to body composition and weight-related health conditions in healthier older persons.

Role: Co-Investigator

**OVERLAP: NONE**

---