

# Michael C. Mahaney, Ph.D.

Professor  
Department of Human Genetics  
South Texas Diabetes and Obesity Institute  
University of Texas Rio Grande Valley  
School of Medicine

## Contact Information

BROBL 1.107  
One W. University Dr  
Brownsville, Texas 78520  
Phone: (956) 882-7492  
Email: michael.mahaney@utrgv.edu

## Education & Training

<b>University of Alberta</b> Edmonton, Alberta Canada	<b>Postdoctoral Fellowship</b>	<b>Genetics</b> <u>Emphasis:</u> genetic epidemiology and medical genetics <u>Supervisor:</u> K. Morgan, Ph.D.
<b>The Ohio State University</b> <i>Ph.D.</i> Columbus, Ohio USA		<b>Biological anthropology</b> <u>Emphasis:</u> population genetics; developmental genetics; physiology, growth & development. <u>Dissertation:</u> "Development and Chronic Disease: Functional Adaptation in Cystic Fibrosis" <u>Advisors:</u> P.W. Sciulli, Ph.D. & K.S. McCoy, M.D.
<b>The Ohio State University</b> <i>M.A.</i> Columbus, Ohio USA		<b>Anthropology</b>
<b>The Ohio State University</b> <i>B.A.</i> Columbus, Ohio USA		<b>Anthropology, Genetics, and Zoology</b> (3 majors)

## Research Focus

### Genetic Epidemiology

Normal and pathological variation in complex phenotypes related to health and disease

#### General

Atherosclerosis and comorbidities

#### Specific Examples

- Metabolism and transport of lipoproteins and lipids
- Oxidative stress and inflammation
- Atherogenesis and arterial calcification
- Arterial compliance
- Bone mineral density
- Bone quality (e.g., strength, elasticity, and stiffness)
- Biomarkers of bone formation and turnover, and calcium metabolism
- cranial/cephalometrics
- odontometrics
- dental morphology

Age-related changes/diseases in bone (osteoporosis, osteoarthritis)

Craniofacial and dental variation and development

## Publications

1. **Mahaney MC**, Sciulli PW. Hominid Pongid affinities: A multivariate analysis of hominoid odontometrics. *Curr Anthropol.* 1983; 24(3): 382-387.
2. **Mahaney MC**, Sciulli. On the classification of Homo: A reply to Marks. *Curr Anthropol* 1983; 25(1): 131-132.
3. Schneider KN, **Mahaney MC**, Sciulli PW. Comparative odontometrics of prehistoric Amerindians of Central and Eastern North America. *Anthropologie* 1984; 22(3): 217-221.
4. Sciulli PW, Schneider KN, **Mahaney MC**. Morphological variation in the permanent dentition of prehistoric Amerindians. *Anthropologie* 1984; 22(3): 211-216.
5. **Mahaney MC**, Sciulli PW, Schneider KN. Hominoid dental systematics: Multivariate analyses of allometrically correct odontometrics. *Anthropologie* 1984; 22(3): 203-210.
6. **Mahaney MC**. Meniere's disease. Evidence for genetic factors. *Bull Hered Dis Prog Alberta* 1985; 4(2): 7-8.
7. Sciulli PW, **Mahaney MC**. A model free comparative study of terminal late Archaic cranial variation in Ohio. *Toledo Area Aboriginal Res Soc Bull* 1985; 14: 1-19.
8. **Mahaney MC**, McCoy KS. Developmental delays and pulmonary disease severity in cystic fibrosis. *Hum Biol.* 1986, Jun;58(3):445-60.
9. **Mahaney MC**. Delayed dental development and pulmonary disease severity in children with cystic fibrosis. *Arch Oral Biol.* 1986;31(6):363-7.
10. Sciulli PW, **Mahaney MC**. Evidence of local biological continuity for an Ohio Hopewell Complex population. *Midcontinental J Archaeol* 1986; 11(2): 181-200.

11. **Mahaney MC.** Differentially delayed development in the hand-wrist skeletons of children with cystic fibrosis: Round vs. tubular bones. *Am J Hum Biol* 1991; 3(1): 17-24.
12. Berti PR, **Mahaney MC.** Quantifying the confidence interval of linear enamel hypoplasia chronologies. In: Recent Contributions to the Study of Enamel Developmental Defects. *J. Paleopathology Monographic Publications - 2*, AH Goodman & LL Capasso, editors. pp. 19-30; 1991.
13. Sciulli PW, Schneider KN, and **Mahaney MC.** Stature estimation in prehistoric Native Americans of Ohio. *Am J Phys Anthropol.* 1990, Nov;83(3):275-80.
14. **Mahaney MC**, Fujiwara TM, and Morgan K. Dental agenesis in the Dariusleut Hutterite Brethren: comparisons to selected Caucasoid population surveys. *Am J Phys Anthropol.* 1990, Jun; 82(2):165-77.
15. Sciulli PW and **Mahaney MC.** Phenotypic evolution in prehistoric Ohio Amerindians: natural selection versus random genetic drift in tooth size reduction. *Hum Biol.* 1991, Aug;63(4):499-511. 6.
16. **Mahaney MC**, Leland MM, Williams-Blangero S, and Martinez YN. Cross-sectional growth standards for captive baboons: I. Organ weight by chronological age. *J Med Primatol.* 1993;22(7-8):400-14.
17. **Mahaney MC**, Leland MM, Williams-Blangero S, and Martinez YN. Cross-sectional growth standards for captive baboons: II. Organ weight by body weight. *J Med Primatol.* 1993;22(7-8): 415-27.
18. **Mahaney MC**, Williams-Blangero S, Blangero J, and Leland MM. Quantitative genetics of relative organ weight variation in captive baboons. *Hum Biol.* 1993, Dec;65(6):991-1003.
19. Blangero J, Williams-Blangero S, and **Mahaney MC.** Multivariate genetic analysis of apo AI concentration and HDL subfractions: evidence for major locus pleiotropy. *Genet Epidemiol.* 1993;10(6):617-22.
20. Comuzzie AG, Blangero J, **Mahaney MC**, Mitchell BD, Stern MP, and MacCluer JW. Genetic and environmental correlations among skinfold measures. *Int J Obes Relat Metab Disord.* 1994, Jun; 18(6):413-8.
21. **Mahaney MC**, Blangero J, Comuzzie AG, VandeBerg JL, Stern MP, and MacCluer JW. Plasma HDL cholesterol, triglycerides, and adiposity. A quantitative genetic test of the conjoint trait hypothesis in the San Antonio Family Heart Study. *Circulation.* 1995, Dec 1;92(11):3240-8.
22. **Mahaney MC**, Blangero J, Rainwater DL, Comuzzie AG, VandeBerg JL, Stern MP, et al. A major locus influencing plasma high-density lipoprotein cholesterol levels in the San Antonio Family Heart Study. Segregation and linkage analyses. *Arterioscler Thromb Vasc Biol.* 1995, Oct;15(10): 1730-9.

23. Comuzzie AG, Blangero J, **Mahaney MC**, Mitchell BD, Hixson JE, Samollow PB, et al. Major gene with sex-specific effects influences fat mass in Mexican Americans. *Genet Epidemiol.* 1995;12(5):475-88.
24. **Mahaney MC**, Jaquish CE, and Comuzzie AG. Statistical genetics of normal variation in family data for oligogenic diseases. *Genet Epidemiol.* 1995;12(6):783-7.
25. Comuzzie AG, Blangero J, **Mahaney MC**, Sharp RM, VandeBerg JL, Stern MP, and MacCluer JW. Triiodothyronine exerts a major pleiotropic effect on reverse cholesterol transport phenotypes. *Arterioscler Thromb Vasc Biol.* 1996, Feb;16(2):289-93.
26. Jaquish CE, **Mahaney MC**, Blangero J, Haffner SM, Stern MP, and MacCluer JW. Genetic correlations between lipoprotein phenotypes and indicators of sex hormone levels in Mexican Americans. *Atherosclerosis.* 1996, Apr 26;122(1):117-25.
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32. Rogers J, **Mahaney MC**, Beamer WG, Donahue LR, and Rosen CJ. Beyond one gene-one disease: alternative strategies for deciphering genetic determinants of osteoporosis. *Calcif Tissue Int.* 1997, Mar;60(3):225-8.
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34. Rainwater DL, Mitchell BD, **Mahaney MC**, and Haffner SM. Genetic relationship between measures of HDL phenotypes and insulin concentrations. *Arterioscler Thromb Vasc Biol.* 1997, Dec;17(12):3414-9.

35. Wang XL, **Mahaney MC**, Sim AS, Wang J, Wang J, Blangero J, Almasy L, Badenhop RB, Wilcken DE. Genetic contribution of the endothelial constitutive nitric oxide synthase gene to plasma nitric oxide levels. *Arterioscler Thromb Vasc Biol.* 1997, Nov;17(11):3147-53.
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41. Edwards KL, **Mahaney MC**, Motulsky AG, and Austin MA. Pleiotropic genetic effects on LDL size, plasma triglyceride, and HDL cholesterol in families. *Arterioscler Thromb Vasc Biol.* 1999, Oct;19(10):2456-64.
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52. Wang XL, and **Mahaney MC**. Genotype-specific effects of smoking on risk of CHD. *Lancet.* 2001, Jul 14;358(9276):87-8.
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63. Hlusko LJ, Weiss KM, and **Mahaney MC**. Statistical genetic comparison of two techniques for assessing molar crown size in pedigree baboons. *Am J Phys Anthropol.* 2002, Feb;117(2):182-9. 54.
64. Martin LJ, **Mahaney MC**, Almasy L, Hixson JE, Cole SA, MacCluer JW, et al. A quantitative trait locus on chromosome 22 for serum leptin levels adjusted for serum testosterone. *Obes Res.* 2002, Jul;10(7):602-7.
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- size and plasma triglyceride in familial hypertriglyceridemia. *J Lipid Res.* 2003, Nov;44(11):2161-8.
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- pedigreed baboons: implications for primate dental development and evolution. *J Exp Zool B Mol Dev Evol.* 2004, May 15;302(3):268-83.
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