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Education & Training

2005	Ph.D.	Anthropology (concentration in human statistical genetics of aging and complex disease), Department of Anthropology, Binghamton University, State University of New York. Dissertation: Genotype × Age Interaction, and the Insulin-like Growth Factor I Axis in the San Antonio Family Heart Study: A Study in Human Senescence
2001	M.A.	Anthropology (concentration in human population biology and infectious disease), Department of Anthropology, Binghamton University, State University of New York Thesis: Models from Mathematical Epidemiology, Ecology and Evolution Meet the Human Treponematoses: Model Development and a Preliminary Analysis of Selected Studies
1995	B.A.	Biology, University of Guam, Mangilao, Guam

Research Focus

My research interests are in the statistical genetics of physiological aging with an emphasis on the metabolic syndrome diseases associated with aging. I have focused on developing genotype × environment interaction (GEI) approaches to study the role of major environmental variables in the etiology of the cardiometabolic disease. I am also actively engaged in bridging the traditional multivariate approaches of statistical genetics with advances in network and systems biology. To this end, I have successfully developed statistical genetic models to incorporate the effects of large gene expression systems, as measured by transcriptomic data, and their interaction with environmental exposures in the phenotypic determination of complex disease traits. I am currently pursuing the extension of this modeling approach to incorporate

methylomic measures of the same systems for the creation of multi-omic GEI models for the study of complex risk in relation to environmental exposures

Recently, I have become keenly interested in FVIII immunogenicity and inhibitor development, and in the development of appropriate statistical analytical approaches to studying this problem. I developed generalized linear mixed model (GLMM) approaches to analyze dendritic cell protein processing and presentation assay data from the FVIII Epitope Determination (FED) Study. For the Personalized Alternative Therapies for Hemophilia (PATH) Study I helped to develop another type of GLMM appropriate for the analysis of determinants of inhibitor development in related individuals. Both GLMMS, for the FED Study and the PATH Study, accounted for important sources of non-independence and heterogeneity, which clarified and increased our power for risk factor estimation and prediction.

Publications

Arya R, Lopez-Alvarenga JC, Almeida M, Kumar S, Peralta J, Diaz-Badillo A, **Diego VP**, Resendez RG, Fowler SP, Jenkinson CP, Lehman D, Curran J, Lynch JL, Hale DE, DeFronzo RA, Mummidi S, Blangero J, Duggirala R. Exome-chip-wide Association Study of Biomarkers of Liver Function and Metabolic Dysfunction-Associated Fatty Liver Disease (MAFLD) in Mexican Americans. Front Med (Lausanne). 2022. In Press.

Manusov EG, Gomez De Ziegler C, **Diego VP**, Munoz-Monaco G, Williams Blangero S. Frailty Index in the Colonias on the US-Mexico Border: A Special Report. Front Med (Lausanne). 2021 Aug 18;8:650259. doi: 10.3389/fmed.2021.650259. PMID:34485319; PMCID: PMC8416248.

Gil M, Alliey-Rodriguez N, Lopez-Alvarenga JC, **Diego V**, Gaona CA, Mata L, Pirela RV, Chavez CA, de Erausquin GA, Melgarejo JD, Maestre GE. Neuropsychiatric Symptoms Among Hispanics: Results of the Maracaibo Aging Study. J Alzheimers Dis. 2021 Feb 19. doi: 10.3233/JAD-201144. Epub ahead of print. PMID: 33612541.

Diego VP, Luu BW, Hofmann M, Dinh LV, Almeida M, Powell JS, Rajalingam R, Peralta JM, Kumar S, Curran JE, Sauna ZE, Kellerman R, Park Y, Key NS, Escobar MA, Huynh H, Verhagen AM, Williams-Blangero S, Lehmann PV, Maraskovsky E, Blangero J, Howard TE. Quantitative HLA-class-II/factor VIII (FVIII) peptidomic variation in dendritic cells correlates with the immunogenic potential of therapeutic FVIII proteins in hemophilia A. J Thromb Haemost. 2020 Jan;18(1):201-216. doi: 10.1111/jth.14647. PubMed PMID: 31556206.

Jankowski W, Park Y, McGill J, Maraskovsky E, Hofmann M, **Diego VP**, Luu BW, Howard TE, Kellerman R, Key NS, Sauna ZE. Peptides identified on monocyte-derived dendritic cells: a marker for clinical immunogenicity to FVIII products. Blood Adv. 2019 May 14;3(9):1429-1440. doi: 10.1182/bloodadvances.2018030452. PubMed PMID: 31053570; PubMed Central PMCID: PMC6517663.

Manusov EG, **Diego VP**, Smith J, Garza JR 2nd, Lowdermilk J, Blangero J, Williams-Blangero S, Fernandez F. UniMóvil: A Mobile Health Clinic Providing Primary Care to the Colonias of the Rio Grande Valley, South Texas. Front Public Health. 2019 Aug 21;7:215. doi: 10.3389/fpubh.2019.00215. eCollection 2019. PubMed PMID: 31497586; PubMed Central

PMCID: PMC6712363.

Pittner K, Bakermans-Kranenburg MJ, Alink LRA, Buisman RSM, van den Berg LJM, Compier-de Block LHCGC, Voorthuis A, Elzinga BM, Lindenberg J, Tollenaar MS, Linting M, **Diego VP**, van IJzendoorn MH. Estimating the Heritability of Experiencing Child Maltreatment in an Extended Family Design. Child Maltreat. 2019 Nov 27:1077559519888587. doi: 10.1177/1077559519888587. [Epub ahead of print] PubMed PMID: 31773993.

Pittner K, van Ijzendoorn MH, Alink LRA, Buisman RSM, Compier-de Block LHCGC, van den Berg LJM, Elzinga BM, Lindenberg J, Tollenaar MS, **Diego VP**, Bakermans-Kranenburg MJ. The genetic and environmental etiology of child maltreatment in a parent-based extended family design. Dev Psychopathol. 2019 Feb;31(1):157-172. doi: 10.1017/S0954579418001608. PubMed PMID: 30757990.

Almeida M, Peralta J, Garcia J, **Diego V**, Goring H, Williams-Blangero S, Blangero J. Modeling methylation data as an additional genetic variance component. BMC Proc. 2018 Sep 17;12(Suppl 9):29. doi: 10.1186/s12919-018-0128-7. eCollection 2018. PubMed PMID: 30263043; PubMed Central PMCID: PMC6157027.

Arya R, Farook VS, Fowler SP, Puppala S, Chittoor G, Resendez RG, Mummidi S, Vanamala J, Almasy L, Curran JE, Comuzzie AG, Lehman DM, Jenkinson CP, Lynch JL, DeFronzo RA, Blangero J, Hale DE, Duggirala R, **Diego VP**. Genetic and environmental (physical fitness and sedentary activity) interaction effects on cardiometabolic risk factors in Mexican American children and adolescents. Genet Epidemiol. 2018 Jun;42(4):378-393.

Kulkarni H, Mamtani M, Peralta JM, **Diego V**, Dyer TD, Goring H, Almasy L, Mahaney MC, Williams-Blangero S, Duggirala R, Curran JE, Blangero J. Lack of Association between SLC30A8 Variants and Type 2 Diabetes in Mexican American Families. J Diabetes Res. 2016;2016:6463214.

Diego VP, Kent JW, Jr, Blangero J. 2015. Familial studies: Genetic inferences. International Encyclopedia of the Behavioral & Social Sciences, Elsevier.

Diego VP, de Chaves RN, Blangero J, de Souza MC, Santos D, Gomes TN, dos Santos FK, Garganta R, Katzmarzyk PT, Maia JA. Sex-specific genetic effects in physical activity: results from a quantitative genetic analysis. BMC Med Genet. 2015

Bellis C, Kulkarni H, Mamtani M, Kent JW Jr, Wong G, Weir JM, Barlow CK, **Diego V**, Almeida M, Dyer TD, Göring HHH, Almasy L, Mahaney MC, Comuzzie AG, Williams-Blangero S, Meikle PJ, Blangero J, Curran JE. 2014. Human plasma lipidome is pleiotropically associated with cardiovascular risk factors and death. Circulation: Cardiovascular Genetics, in press.

Bozaoglu K, Attard C, Kulkarni H, Cummings N, **Diego VP**, Carless MA, Shields KA, Johnson MP, Kowlessur S, Dyer TD, Comuzzie AG, Almasy L, Zimmet P, Moses EK, Göring HH, Curran JE, Blangero J, Jowett JB. Plasma levels of soluble Interleukin 1 Receptor Accessory Protein are Reduced in Obesity. J Clin Endocrinol Metab. 2014 Jun 10:jc20134475.

Chaves RN, Baxter-Jones A, Santos D, Gomes TN, dos Santos FK, de Souza MC, **Diego VP**,

Maia J. Clustering of body composition, blood pressure and physical activity in Portuguese families. Ann Hum Biol. 2014 Mar-Apr;41(2):157-65.

Choh AC, Lee M, Kent JW, **Diego VP**, Johnson W, Curran JE, Dyer TD, Bellis C, Blangero J, Siervogel RM, Towne B, Demerath EW, Czerwinski SA. Gene-by-age effects on BMI from birth to adulthood: The Fels Longitudinal Study. Obesity. 2014 Mar;22(3):875-81.

Kulkarni H, Meikle PJ, Mamtani M, Weir JM, Almeida M, **Diego V**, Peralta JM, Barlow CK, Bellis C, Dyer TD, Almasy L, Mahaney MC, Comuzzie AG, Göring HH, Curran JE, Blangero J. Plasma lipidome is independently associated with variability in metabolic syndrome in Mexican American families. J Lipid Res. 2014 May;55(5):939-46.

Quillen EE, Voruganti VS, Chittoor G, Rubicz R, Peralta JM, Almeida MAA, Kent JW, **Diego VP**, Dyer TD, Comuzzie AG, Göring HHH, Duggirala R, Almasy L, Blangero. Evaluation of estimated genetic values and their application to genome-wide investigation of systolic blood pressure. BMC Proceedings 2014, 8(Suppl 1):S66

Santos DM, Katzmarzyk PT, **Diego VP**, Gomes TN, Santos FK, Blangero J, Maia JA. Genotype by energy expenditure interaction and body composition traits: The Portuguese Healthy Family Study. Biomed Res Int. 2014;2014:845207.

Santos DM, Katzmarzyk PT, **Diego VP**, Blangero J, Souza MC, Freitas DL, Chaves RN, Gomes TN, Santos FK, Maia JA. 2014. Genotype by sex and genotype by age interactions with sedentary behavior: The Portuguese Healthy Family Study. PLoS One, 2014; 9(10):e110025.

Ziegler A, Bohossian N, **Diego VP**, Yao C. Genetic prediction in the genetic analysis workshop 18 sequencing data. Genet Epidemiol. 2014 Sep;38 Suppl 1:S57-62.

Blangero J, **Diego VP**, Dyer TD, Almeida M, Peralta J, Kent JW Jr, Williams JT, Almasy L, Göring HH. A kernel of truth: statistical advances in polygenic variance component models for complex human pedigrees. Adv Genet. 2013;81:1-31.

Glahn DC, Kent JW Jr, Sprooten E, **Diego VP**, Winkler AM, Curran JE, McKay DR, Knowles EE, Carless MA, Göring HH, Dyer TD, Olvera RL, Fox PT, Almasy L, Charlesworth J, Kochunov P, Duggirala R, Blangero J. Genetic basis of neurocognitive decline and reduced white-matter integrity in normal human brain aging. Proc Natl Acad Sci U S A. 2013;110(47):19006-11.

Santos DM, Katzmarzyk PT, **Diego VP**, et al. Genotype by energy expenditure interaction with metabolic syndrome traits: The Portuguese Healthy Family Study. PLoS One. 2013;8(11):e80417.

Diego VP, Curran JE, Charlesworth J, Peralta JM, Voruganti VS, Cole SA, Dyer TD, Johnson MP, Moses EK, Göring HH, Williams JT, Comuzzie AG, Almasy L, Blangero J, Williams-Blangero S. Systems genetics of the nuclear factor-κB signal transduction network. I. Detection of several quantitative trait loci potentially relevant to aging. Mech Ageing Dev. 2012 Jan;133(1):11-9.

Heathcote GM, **Diego VP**, Ishida H, and Sava VJ. 2012. An Osteobiography of a Remarkable 16th-17th Century Chamorro Man, from Taga, Tinian. Micronesica 43(2):131-213. Available at

www.uog.edu/up/micronesica/dynamicdata/assetmanager/images/vol43/heathcote.pdf

Heathcote GM, **Diego VP**, Ishida H, and Sava VJ. 2012. Legendary Chamorro Strength: Skeletal Embodiment and the Boundaries of Interpretation. In: Stodder ALW and Palkovich AM, editors. The Bioarchaeology of Individuals. Gainesville: University Press of Florida, p 44-67.

Kent JW Jr, Göring HH, Charlesworth JC, Drigalenko E, **Diego VP**, Curran JE, Johnson MP, Dyer TD, Cole SA, Jowett JB, Mahaney MC, Comuzzie AG, Almasy L, Moses EK, Blangero J, Williams-Blangero S. Genotype×age interaction in human transcriptional ageing. Mech Ageing Dev. 2012 Sep-Oct;133(9-10):581-90.

Voruganti VS, **Diego VP**, Haack K, Cole SA, Blangero J, Göring HH, Laston S, Wenger CR, Ebbesson SO, Fabsitz RR, Devereux RB, Howard BV, Umans JG, Maccluer JW, Comuzzie AG. A QTL for genotype by sex interaction for anthropometric measurements in Alaskan Eskimos (GOCADAN Study) on chromosome 19q12-13. Obesity. 2011 Sep;19(9):1840-6.

Charlesworth JC, Curran JE, Johnson MP, Göring HHH, Dyer TD, **Diego VP**, Kent JW Jr, Mahaney MC, Rainwater DL, O'Leary DH, Almasy L, Stern MP, MacCluer JW, Moses EK, Blangero J. Transcriptomic epidemiology of smoking. BMC Med Genomics. 3:29, 2010.

Diego VP, Almasy L, Rainwater DL, Mahaney MC, Comuzzie AG, Cole SA, Tracy RP, Stern MP, MacCluer JW, Blangero J. A quantitative trait locus on chromosome 5p influences d-dimer levels in the San Antonio Family Heart Study. Int J Vasc Med. 2010:490241, 2010.

Jowett JB, **Diego VP**, Kotea N, Kowlessur S, Chitson P, Dyer TD, Zimmet P, Blangero J. Genetic influences on type 2 diabetes and metabolic syndrome related quantitative traits in Mauritius. Twin Res Hum Genet. 12(1):44-52, 2009.

Li X, Monda KL, Göring HH, Haack K, Cole SA, **Diego VP**, Almasy L, Laston S, Howard BV, Shara NM, Lee ET, Best LG, Fabsitz RR, MacCluer JW, North KE. Genome-wide linkage scan for plasma high density lipoprotein cholesterol, apolipoprotein A-1 and triglyceride variation among American Indian populations: The Strong Heart Family Study. J Med Genet. 46(7):472-9, 2009.

Mottl AK, Vupputuri S, Cole SA, Almasy L, Göring HH, **Diego VP**, Laston S, Shara N, Lee ET, Best LG, Fabsitz RR, MacCluer JW, Umans JG, North KE. Linkage analysis of albuminuria. J Am Soc Nephrol. 20(7):1597-606, 2009.

Best LG, North KE, Li X, Palmieri V, Umans JG, MacCluer J, Laston S, Haack K, Göring H, **Diego VP**, Almasy L, Lee ET, Tracy RP, Cole S. Linkage study of fibrinogen levels: The Strong Heart Family Study. BMC Med Genet 9:77, 2008.

Franceschini N, Almasy L, MacCluer JW, Göring HH, Cole SA, **Diego VP**, Laston S, Howard BV, Lee ET, Best LG, Fabsitz RR, North KE. Diabetes-specific genetic effects on obesity traits in American Indian populations: The Strong Heart Family Study. BMC Med Genet 9:90, 2008.

Franceschini N, MacCluer JW, Rose KM, Rutherford S, Cole SA, Laston S, Göring HH, **Diego VP**, Roman MJ, Lee ET, Best LG, Howard BV, Fabsitz RR, North KE. Genome-wide linkage

analysis of pulse pressure in American Indians: The Strong Heart Study. Am J Hypertens 21(2):194-9, 2008.

Mottl AK, Vupputuri S, Cole SA, Almasy L, Göring HH, **Diego VP**, Laston S, Franceschini N, Shara NM, Lee ET, Best LG, Fabsitz RR, MacCluer JW, Umans JG, North KE. Linkage analysis of glomerular filtration rate in American Indians. Kidney Int 74(9):1185-91, 2008.

Vinson A, Mahaney MC, **Diego VP**, Cox LA, Rogers J, VandeBerg JL, Rainwater DL. Genotype-by-diet effects on co-variation in Lp-PLA2 activity and LDL-cholesterol concentration in baboons fed an atherogenic diet. J Lipid Res. 49(6):1295-302, 2008.

Almasy L, Göring HH, **Diego V**, Cole S, Laston S, Dyke B, Howard BV, Lee ET, Best LG, Devereux R, Fabsitz RR, MacCluer JW. A novel obesity locus on chromosome 4q: The Strong Heart Family Study. Obesity 15(7):1741-1748, 2007.

Diego VP, Rainwater DL, Wang X-L, Cole SA, Curran JE, Johnson MP, Dyer TD, Williams JT, Comuzzie AG, MacCluer JW, Mahaney MC, Blangero. Genotype × Adiposity Interaction Linkage Analyses Reveal a Locus on Chromosome 1 for Lipoprotein-associated Phospholipase A_2, a Marker of Inflammation and Oxidative Stress. American Journal of Human Genetics 80(1):168-77, 2007.

Puppala S, Arya R, Thameem F, Arar NH, Bhandari K, Lehman DM, Schneider J, Fowler S, Farook VS, **Diego VP**, Almasy L, Blangero J, Stern MP, Duggirala R, Abboud HE. Genotype by diabetes interaction effects on the detection of linkage of glomerular filtration rate to a region on chromosome 2q in Mexican Americans. Diabetes, 56(11):2818-28, 2007.

Tejero ME, Cai G, Göring HH, **Diego V**, Cole SA, Bacino CA, Butte NF, Comuzzie AG. Linkage analysis of circulating levels of adiponectin in Hispanic children. International Journal of Obesity 31(3):535-42, 2007.

Voruganti VS, Göring HH, **Diego VP**, Cai G, Mehta NR, Haack K, Cole SA, Butte NF, Comuzzie AG. Genome-wide scan for serum ghrelin detects linkage on chromosome 1p36 in Hispanic children: Results from the Viva La Familia Study. Pediatric Research 62(4):445-50, 2007.

Cai G, Cole SA, Butte N, Bacino C, **Diego V**, Tan K, Göring HH, O'Rahilly S, Farooqi IS, Comuzzie AG. A QTL on chromosome 18q for physical activity and dietary intake in Hispanic children. Obesity 14(9):1596-604, 2006.

Diego VP, Göring HHH, Cole SA, Almasy L, Dyer TD, Blangero J, Duggirala R, Laston S,Wenger C, Cantu T, Dyke B, North K, Schurr T, Best LG, Devereux RB, Fabsitz RR, Howard BV, MacCluer JW. Fasting insulin and obesity-related phenotypes are linked to chromosome 2p: The Strong Heart Family Study. Diabetes 55(6):1874-1878, 2006.

Franceschini N, MacCluer JW, Göring HH, Cole SA, Rose KM, Almasy L, **Diego V**, Laston S, Lee ET, Howard BV, Best LG, Fabsitz RR, Roman MJ, North KE. A quantitative trait loci specific gene-by-sex interaction on systolic blood pressure among American Indians: The Strong Heart Family Study. Hypertension 48(2):266-270, 2006.

North KE, Goring HH, Cole SA, **Diego VP**, Almasy L, Laston S, Cantu T, Howard BV, Lee ET, Best LG, Fabsitz RR, MacCluer JW. Linkage analysis of LDL cholesterol in American Indian populations: The Strong Heart Family Study. Journal of Lipid Research 47(1):59-66, 2006.

North KE, Almasy L, Göring HHH, Cole S, **Diego VP**, Laston S, Cantu T, Williams JT, Howard BV, Lee ET, Best LG Fabsitz RR, MacCluer JW. Linkage analysis of factors underlying the insulin resistance syndrome. Obesity Research 47(1):1877-1884, 2005.

Diego VP, Almasy L, Dyer TD, Soler JM, Blangero J. Strategy and model building in the fourth dimension: A null model for genotype x age interaction as a Gaussian stationary stochastic process. BMC Genetics 4(Suppl 1):S34, 2003.

Diego VP, Atwood L, Mathias RA, Almasy L. Consistency of genetic analyses in longitudinal data: Observations from the GAW13 Framingham Heart Study data. Genetic Epidemiology 25(Suppl 1):S29-S35, 2003.

Diego VP. Sociocultural vectors and the evolution of virulence in diarrheal pathogens affecting Micronesian populations. Pacific Health Dialog 5(1):54-66, 1998.

Heathcote GM, Stodder ALW, Buckley HR, Hanson DB, Douglas MT, Underwood JH, Taisipic TF, **Diego VP**. On treponemal disease in the Western Pacific: Corrections and critique. Current Anthropology 39(3):54-66, 1998.

Heathcote GM, **Diego VP**, Camacho FA, Taisipic TF. CA comment on “The dimensions of social life in the Pacific: Human diversity and the myth of the primitive isolate,” by JE Terrell, TL Hunt and C Gosden. Current Anthropology 38(2):180-181, 1997.

Abstracts

Diego VP, Almeida M, Peralta JM, Curran JE, Luu BW, Powell JS, Meade H, Rajalingam R, Escobar MA, Williams-Blangero S, Almasy L, Blangero J, Howard TE. Might Prothrombin-543R>L, A Major Determinant of Mexican American Coagulation Potential, Contribute to the Disparately Elevated FVIII-Inhibitor-Risk in Hispanic Hemophilia-A Patients? 11th BIC International Conference (Advances in Haemostasis and Bleeding Disorders), Venice, Italy, September 17-19, 2021. Haematologica 2021;106(s1):1-35; https://doi.org/10.3324/haematol.2021.s1.

Jhaveri S, **Diego VP**, Nguyen HAT, Kumar S, Almeida MA, Peralta JM, Curran JE, Luu BW, Lehman DM, DeFronzo RA, Escobar MA, Williams-Blangero S, Duggirala R, Powell JS, Almasy L, Blangero J, Howard TE. The G505A Nonsynonymous Single-Nucleotide Polymorphism (SNP) in TAFI, the Gene Encoding Thrombin-Activatable Fibrinolysis Inhibitor (TAFI) Is Pleiotropically Associated with TAFI Antigen Levels and Coronary Heart Disease (CHD) in Mexican Americans of South Texas. Blood 2021; 138 (Supplement 1): 3217. doi: https://doi.org/10.1182/blood-2021-151968

Nguyen HAT, **Diego VP**, Jhaveri S, Almeida MA, Kumar S, Peralta JM, Curran JE, Luu BW, Lehman DM, DeFronzo RA, Escobar MA, Williams-Blangero S, Duggirala R, Powell JS, Almasy L, Blangero J, Howard TE. The Factor II (FII) Expression Quantitative Trait Locus (eQTL)

Prothrombin G20210A Is Pleiotropically Associated with Plasma Fibrinogen Levels and Has a Profound Effect on Obesity in Mexican Americans of South Texas. Blood 2021; 138 (Supplement 1): 1059. doi: https://doi.org/10.1182/blood-2021-154338

Diego VP, Almeida M, Viel KR, Luu BW, Ameri A, Chitlur MB, Haack K, Curran J, Powell JS, Peralta JM, Mead H, Rajalingam R, Escobar MA, Dinh LV, Williams-Blangero S, Kasper CK, Almasy L, Cole SA, Blangero J, Howard TE. Factor VIII (FVIII)-Haplotype Mismatch Increases Risk of Inhibitor Development in the Treatment of Hemophilia A (HA). Res Pract Thromb Haemost. 2019;3(Suppl. 1):50-51.

Diego VP, Rajalingam R, Luu BW, Hofmann M, Almeida M, Dinh LV, Mead H, Powell JS, Peralta JM, Escobar MA, Williams-Blangero S, Marakovsky E, Blangero J, Howard TE. The role of HLA-class-II (HLAcII) molecules in determining the immunogenicity potential of therapeutic Factor VIII proteins (tFVIIIs) in Hemophilia A (HA): The Gate Keeper Hypothesis. Res Pract Thromb Haemost. 2019;3(Suppl. 1):79-80.

Howard TE, Luu BW, Hofmann M, Almeida MA, Kumar S, Dinh LV, Mead H, Powell JS, Escobar MA, Rajalingam R, Williams-Blangero S, Blangero J, Maraskovsky E, **Diego VP**.
The Dendritic Cell HLA-Class-II/Therapeutic Factor VIII (FVIII) Peptidome Is Influenced in Unanticipated Ways By the B-Domain of FVIII and the FVIII Chaperon Protein, Von Willebrand Factor: The Outrigger and Glycosylation-Umbrella (GUMB) Hypotheses. Blood (2019) 134 (Supplement_1): 161.

Chaves RN, Souza MC, Gomes TN, Santos FK, Pereira S, **Diego VP**, Baxter-Jones A, Maia J. Geographical Effects In Familial Clustering Of Physical Activity, Adiposity And Metabolic Syndrome. American College of Sports Medicine, 66th Annual Meeting, May 28-June 1, 2019, Orlando, FL.

Diego VP, Almeida MA, Luu BW, Haack K, Chitlur MB, Ameri A, Dinh LV, Rajalingam R, Powell JS, Blangero J, Almasy L, Cole S, Howard TE. Genetics of Factor VIII inhibitor development in Hemophilia patients: Novel statistical approaches in the PATH Study. Blood 2018;132:1199.

Diego VP, Garcia-Hernandez A, Melgarejo JD, Narkhede A, Leendertz R, Pirela RV, Terwilliger J, Lee JH, Blangero J, Brickman AM, Maestre GE. White matter hyperintensities in Latin Americans: Findings from the Maracaibo Aging Study. Alzheimer's & Dementia. 2018;14(7, Supplement):P477.

Diego VP, Howard TE, Peralta JM, Almeida M, Manusov E, Johnson M, Curran J, Williams-Blangero S. Genotype-by-socioeconomic status interaction modulates gene expression in the hypothalamic-pituitary-adrenal axis. University of Texas Rio Grande Valley School of Medicine 2nd Annual Research Symposium, Sep. 15, 2018, McAllen, TX.

Howard TE, **Diego VP**, Hofmann M, Almeida M, Luu BW, Dinh LV, Rajalingam R, Escobar M, Curran J, Williams-Blangero S, Powell J, Blangero J, Maraskovsky E, Key NS, Sauna ZE. Analysis of HLACII peptidomes presented by dendritic cells (DCs) from healthy donors and Hemophilia A (HA) patients with or without Factor VIII (FVIII) inhibitors after ex vivo administration of different therapeutic FVIII proteins (tFVIIIs). Hum Immunol. 2018;79:58-187.

Howard TE, **Diego VP**, Luu BW, Curran J, Blangero J, Williams-Blangero S. Health disparities in inhibitor development in Hemophilia A: Hypotheses on the differential prevalence by race/ethnicity. University of Texas Rio Grande Valley School of Medicine 2nd Annual Research Symposium, Sep. 15, 2018, McAllen, TX.

Manusov E, **Diego V**, Garza J, Smith J, Lowdermilk J Blangero J, Williams-Blangero S. Unimovil: A mobile health clinic providing primary care to the colonias of the Rio Grande Valley, Texas. University of Texas Rio Grande Valley School of Medicine 2nd Annual Research Symposium, Sep. 15, 2018, McAllen, TX.

Pittner K, Bakermans-Kranenburg MJ, Alink LRA, Buisman RSM, van den Berg LJM, Compier-de Block LHCG, Elzinga BM, Lindenberg L, Tollenaar MS, **Diego VP**, van IJzendoorn MH. Genetic and Environmental Influences on Child Maltreatment. Society for Research in Child Development, Biennial Meeting, March 21-23, 2019, Baltimore, MD.

Sauna Z, **Diego V**, Almeida M, Luu B, Hofmann M, Hernandez J, Rajalingam R, Williams-Blangero S, Curran J, Powell J, Escobar M, Blangero J, Maraskovsky E, Key N, Howard T. Analysis of HLA-class-II (HLAcII) peptidomes in response to several therapeutic factor (F)VIII proteins (tFVIIIs) in healthy donors and Hemophilia A (HA) patients with and without FVIII Inhibitors (FEIs). Res Practice Thromb Haemost. 2018;2(S1):94.

Almeida M, Porto A, Peralta J, Garcia A, **Diego V**, Goring H, Williams-Blangero S, Blangero J. Modeling methylation data as an additional variance component. Abstracts for the 20th Genetics Analysis Workshop, March 4-8, 2017, San Diego, California.

Diego VP, Garcia-Hernández A, Almeida M, Peralta J, Porto A, Howard TE, Blangero J. Gene-environment interaction influencing lipid traits and methylation data for genes influencing lipid metabolism. Abstracts for the 20th Genetics Analysis Workshop, March 4-8, 2017, San Diego, California.

Diego V, Luu B, Almeida M, Hofmann M, Hernandez J, Morelli A, Ameri A, Rajalingam R, Powell J, Blangero J, Marakovsky E, Howard T. Quantizing HLA-class-II (HLAcII) Peptidomic Parameters as Immunologically-Relevant Endophenotypes to Improve Immunogenicity Risk Prediction for Protein Therapeutics ("Biologics") using Factor (F)VIII Inhibitor Development in Hemophilia A (HA) as a Model. Abstracts of the 43rd Meeting of the American Society for Histocompatibility and Immunogenetics, September 11-15, 2017, San Francisco, California.

Garcia-Hernández A, **Diego VP**, Almeida M, Peralta J, Porto A, Howard TE, Blangero J. Comparing the Subspaces of Gene Methylation Networks Affecting Human Biological Pathways Perturbed by Drug Intervention. Abstracts for the 20th Genetics Analysis Workshop, March 4-8, 2017, San Diego, California.

Luu B, Hofmann M, **Diego V**, Almeida M, Hernandez J, Morelli A, Ameri A, Rajalingam R, Powell J, Blangero J, Marakovsky E, Howard T. Improved Immunogenicity Prediction using Composite Variables that Incorporate the Known Patient, Product and Therapy Related Risk Factors for Inhibitor Development with Immunologic Parameters from the HLAclassII (HLAcII)Factor (F)VIII Peptidome. Abstracts of the 63rd Annual Scientific and Standardization Committee Meeting of

the International Society on Thrombosis and Hemostasis, July 8 – 13, 2017, Berlin, Germany.

Diego VP, Vanamala J, Farook VS, Reddivari L, Fowler SP, Puppala S, Chittoor G, Resendez RG, Alvarenga JCL, Mummidi S, Almasy L, Curran JE, Comuzzie AG, Lehman DM, Jenkinson CP, Lynch JL, DeFronzo RA, Blangero J, Hale DE, Duggirala R, Arya R. Genotype-by-multivariate dietary environment interaction effects on cardiometabolic risk factors in Mexican American children: The SAFARI Study. Abstracts of the 66th Annual Meeting of the American Society for Human Genetics, October 18-22, 2016, Vancouver, British Columbia, Canada.

Diego VP, Higgins PB, Voruganti VS, Hazuda HP, Rainwater DL, Göring HHH, Almasy L, Mahaney MC, Comuzzie AG, Blangero J. Metabolic syndrome traits exhibit genotype-by-environment interaction in relation to socioeconomic status in the San Antonio Family Heart Study. Journal of Diabetes 3(Suppl s1):9, 2010: Abstracts of the 4th International Congress on Prediabetes and Metabolic Syndrome, April 6-9, 2011, Madrid, Spain.

Diego VP, Higgins PB, Voruganti VS, Göring HHH, Laston S, Cole SA, Fabsitz R, Ebbesson S, Howard BV, MacCluer JW, Zhu J, Umans JG, Comuzzie AG. Markers of endothelial activation exhibit a mitochondrial-effects variance components in the GOCADAN Study. Journal of Diabetes 3(Suppl s1):9, 2010: Abstracts of the 4th International Congress on Prediabetes and Metabolic Syndrome, April 6-9, 2011, Madrid, Spain.

Diego VP, Drigalenko E, Carless MA, Curran JE, Dyer TD, Almasy LA, Rainwater DL, Mahaney MC, Comuzzie AG, Cole SA, Tracy RP, MacCluer JW, Moses EK, Goring HHH, Blangero J. Genome-wide linkage and association reveals that the tissue factor (F3) locus on chromosome 1p22-p21 likely influences quantitative variation in D-dimer levels. 19th Annual Meeting of the International Genetic Epidemiology Society, October 10-12, 2010, Boston, MA.

Diego VP, Dyer TD, Kent JW Jr, Göring HHH, Blangero J. A fast algorithm for quantitative trait association analysis in large pedigrees. Genetic Analysis Workshop 17, October 13-16, 2010, Boston, MA.

Diego VP, Glahn DC, Kent JW Jr, Curran JE, Olvera RL, Dyer TD, Almasy LA, Moses EK, Göring HHH, Carless MA, Blangero J. A genome-wide linkage and association study of serum substance P levels identifies potential candidate genes in the Genetics of Brain Structure Study. Proceedings of the American Society of Human Genetics 60th Annual Meeting, November 2-6, 2010, Washington DC.

Higgins PB, **Diego VP**, Kent JW Jr, Carless MA, Dyer TD, Rainwater DL, Almasy LA, Comuzzie AG, Curran JE, Moses EK, Mahaney MC, Blangero J. Identification of a novel candidate gene on chromosome 20p12 influencing variation in lipoprotein-associated phospholipase A2, a risk factor for cardiovascular disease. Proceedings of the American Society of Human Genetics 60th Annual Meeting, November 2-6, 2010, Washington DC.

Kent J, Kumar S, Carless M, Curran JE, Dyer TD, **Diego VP**, Charlesworth J, Johnson MP, Comuzzie AG, Mahaney MC, Almasy L, Moses EK, Goring HHH, Blangero J, Williams-Blangero S. Genetic determinants of telomere length localized by linkage, association, and gene expression profiling. Proceedings of the American Society of Human Genetics 60th Annual Meeting, November 2-6, 2010, Washington DC.

Diego VP, Vinson A, Higgins PB, Peralta JM, Charlesworth J, Cole SA, Dyer TD, Curran JE, Johnson MP, Moses EK, Göring HHH, Almasy L, Comuzzie AG, Rainwater DL, Mahaney MC, MacCluer JW, Blangero J, Williams-Blangero S. Genetical genomic analyses of the nuclear factor-κ B signal transduction network: Detection of emergent system-level properties relevant to the aging process. Proceedings of the American Society of Human Genetics 59th Annual Meeting, October 20-24, 2009, Honolulu, Hawaii.

Dyer TD, **Diego VP**, Kent JW Jr., Göring HHH, Blangero J. Rapid exact likelihood-based quantitative trait association analysis in large pedigrees. Proceedings of the American Society of Human Genetics 59th Annual Meeting, October 20-24, 2009, Honolulu, Hawaii.

Higgins PB, **Diego VP**, Cole SA, Dyer TD, Curran JE, Johnson MP, Moses EK, Almasy L, Göring HHH, Comuzzie AG, MacCluer JW, Mahaney MC, Blangero J. Principal components factor analysis of the insulin-like growth factor I (IGF-I) axis reveals a quantitative trait locus on chromosome 16p that is longitudinally associated with insulin and is mediated by IGF binding protein 3 and tumor necrosis factor-α. Proceedings of the American Society of Human Genetics 59th Annual Meeting, October 20-24, 2009, Honolulu, Hawaii.

Franceschini N, Cole SA, Rose KM, Rutherford S, Göring HHH, **Diego V**, Laston S, MacCluer JW, Lee ET, Best L, Howard BV, Fabsitz RR, Roman MJ, North KE. Genetic determinants of pulse pressure in American Indians: The Strong Heart Study. Genetic Epidemiology 31:472, 2007.

Franceschini N, MacCluer JW, Göring HHH, **Diego V**, Cole SA, S Laston S, Best LG, Fabsitz RR , Lee ET, Russell M, North KE. Genotype-by-smoking interaction on blood pressure traits: The Strong Heart Family Study. Genetic Epidemiology 31:626, 2007.

Franceschini N, Rutherford S, Cole SA, MacCluer JW, Laston S, Rose KM, Göring HHH, **Diego V**, Lee ET, Best LG, Howard BV, Fabsitz RR, Roman MJ, North KE. Evidence for association between UTS2R and systolic blood pressure under a chromosome 17 linkage peak among American Indians: The Strong Heart Family Study. American Journal of Epidemiology 165:S107, 2007.

Charlesworth JC, Curran JE, Johnson MP, Göring HHH, Dyer TD, **Diego V**, Moses EK, Blangero J. Transcriptomic epidemiology of smoking. Proceedings of the 6th Australian Gene Mapping Conference 2007.

Diego VP, Göring HH, Rainwater DL, Cole SA, Dyer TD, Williams JT, MacCluer JW, Mahaney MC, Blangero J. Genotype-by-diet interaction analysis of paraoxonase 1 reveals a QTL on chromosome 17. Proceedings of the American Society of Human Genetics 57th Annual Meeting, October 23-27, 2007, San Diego, California.

Göring HHH, Kent Jr. JW, **Diego VP**, Dyer TD, Blangero J. Power of measured genotype-based association analysis, conditional on a variance components-based linkage model, in related individuals. Proceedings of the American Society of Human Genetics 57th Annual Meeting, October 23-27, 2007, San Diego, California.

Diego VP, Rainwater DL, Wang X-L, Cole SA, Curran JE, Johnson MP, Dyer TD, Williams JT,

Comuzzie AG, MacCluer JW, Mahaney MC, Blangero. Genotype × adiposity interaction linkage analyses reveal a locus on chromosome 1 for lipoprotein-associated phospholipase A_2, a marker of inflammation and oxidative stress. Abstract book of the 11th International Congress of Human Genetics, held on August 6-10, 2006 at Brisbane, Australia.

Diego VP, Voruganti VS, Dyer TD, Cole SA, Almasy L, Rainwater DL, Mahaney MC, MacCluer JW, Blangero J, Comuzzie AG. Genotype × sex interaction analyses identify a region on chromosome 20 contributing to anthropometric measures of obesity in the San Antonio Family Heart Study. Obesity Suppl:A267, 2006.

Franceschini N, Göring HHH, Cole SA, **Diego VP**, MacCluer JW, Almasy L, Laston S, Howard BV, Lee ET, Best LG, Fabsitz RR, North K. Diabetes specific genetic effects on obesity traits in American Indian populations: The Strong Heart Family Study. Obesity Suppl:A46, 2006.

North KE, Cole SA, Göring HHH, Almasy L, **Diego VP,** Laston S, Comuzzie AG, Howard B, Lee ET, Best LG, Fabsitz RR, Ebbesson SOE, MacCluer JW. The genetics of cardiovascular disease risk factors in American Indians and Alaska Natives: The Strong Heart and GOCADAN Studies. American Journal of Physical Anthropology Suppl 42:139, 2006.

Voruganti VS**, Diego VP**, Blangero J, Haack K, Cole SA, Ebbesson SOE, Devereux R, Fabsitz RR, Howard BV, Comuzzie AG, MacCluer JW. A QTL for genotype by sex specific interaction for anthropometric measurements in Alaskan Eskimos on chromosome 19q12-13: The GOCADAN study. Obesity Suppl:A8-A9, 2006.

Voruganti VS, Göring HHH, **Diego VP**, Cai G, Mehta N, Haack K, Cole SA, Butte NF, Comuzzie AG. Genome wide scan for plasma ghrelin detects linkage on chromosome 1p36 in Hispanic children: Results from the Viva La Familia study. Obesity Suppl:A196, 2006.

Best LG, Cole S, Howard BV, Lee ET, MacCluer JW, Palmieri V, North KE, **Diego VP,** Göring HHH. Genetic linkage analysis of fibrinogen levels: The Strong Heart Family Study. Circulation 111:227, 2005.

Cai G, Butte NF, Cole SA, Farooqi S, Göring HHH, **Diego V,** O'Rahilly S, Comuzzie AG. A QTL on chromosome 18q influences energy intake and expenditure in Hispanic children – The Viva la Familia Study. Obesity Research 13 (Suppl):A9, 2005.

Cole SA, Laston S, Göring HHH, **Diego VP,** Dyer TD, Blangero J, Ebbeson S, Howard BV, MacCluer JW, Comuzzie AG. Linkage of lipoprotein phenotypes to chromosome 19p in Alaska natives from the GOCADAN Study. Obesity Research 13 (Suppl):A100, 2005.

Diego VP, Dyer TD, Almasy L, MacCluer JW, Blangero J. Power to detect genotype-by-environment interaction in continuous environments. Abstract Book of the Proceedings of The American Society of Human Genetics 55th Annual Meeting, p. 416, 2005.

Diego VP, Rainwater DL, Winnier D, Wang X-L, AlmasyL, Williams JT, Blangero J, MacCluer JW, Mahaney MC. Mitochondrial genetic effects × age interaction in a marker of oxidative stress in the San Antonio Family Heart Study. Genetic Epidemiology 29:242, 2005.

Mottl AK, Vupputuri S, Almasy L, Göring HHH, Cole SA, **Diego VP,** Laston S, Howard BV, Lee ET, Best LG, Fabsitz RR, MacCluer JW, Umans JG, North KE. Susceptibility to renal disease in Native Americans maps to 16q23.3-24.1 and 18p11.22-12.1: The Strong Heart Family Study. Journal of the American Society of Nephrology 16:589A, 2005.

Tejero ME, Cai G, Göring H, **Diego V,** Cole SA, Butte N, Comuzzie AG. Linkage analysis of circulating levels of adiponectin in Hispanic children. Obesity Reearch 13 (Suppl):A37, 2005.

Diego VP, Cole SA, Göring HHH, Almasy L, North K, Howard BV, Lee ET, Best LG, Devereux RB, Fabsitz RR, Laston S, Wenger C, Bridges J, Cantu T, Dyke B, MacCluer JW. Linkage analyses in the Strong Heart Family Study reveal a region on chromosome 2 affecting a cluster of traits potentially related to muscle tissue metabolism. Circulation 109:16-17, 2004.
Diego VP, Almasy L, Mahaney MC, Comuzzie AG, MacCluer JW, Blangero J. QTL mapping in biological anthropology: Genotype × age interaction in the growth hormone axis. American Journal of Physical Anthropology 123(S38): 87, 2004.

Diego VP: On the origin of syphilis. American Journal of Human Biology, 13(1): 118, 2001.

Diego VP: Densities of fecal streptococci and fecal coliforms in coastal sediments and waters of Tumon Bay, Guam. Proceedings of *Na Liko Na'auao* Minority Biomedical Research Conference, 1(2), 1994.