

Publications List of the Molecular Epidemiology Group

Early Online

Bay-Jensen AC, Slagboom E, Chen-An P, Alexandersen P, Qvist P, Christiansen C, Meulenbelt I, Karsdal MA. Role of hormones in cartilage and joint metabolism: understanding an unhealthy metabolic phenotype in osteoarthritis. *Menopause*. 2012 Dec 10.

Beekman M, Blanché H, Perola M, Hervonen A, Bezrukov V, Sikora E, Flachsbarth F, Christiansen L, De Craen AJ, Kirkwood TB, Rea IM, Poulain M, Robine JM, Valensin S, Stazi MA, Passarino G, Deiana L, Gonos ES, Paternoster L, Sørensen TI, Tan Q, Helmer Q, Van den Akker EB, Deelen J, Martella F, Cordell HJ, Ayers KL, Vaupel JW, Törnwall O, Johnson TE, Schreiber S, Lathrop M, Skytthe A, Westendorp RG, Christensen K, Gampe J, Nebel A, Houwing-Duistermaat JJ, Eline Slagboom P, Franceschi C; The GEHA consortium. Genome-wide linkage analysis for human longevity: Genetics of Healthy Ageing Study. *Aging Cell*. 2013 Jan 3. doi: 10.1111/ace.12039.

Bos SD, Beekman M, Maier AB, Karsdal MA, Kwok WY, Bay-Jensen AC, Kloppenburg M, Slagboom PE, Meulenbelt I. Metabolic health in families enriched for longevity is associated with low prevalence of hand osteoarthritis and influences OA biomarker profiles. *Ann Rheum Dis*. 2012 Oct 27

Broer L, Codd V, Nyholt DR, Deelen J, Mangino M, Willemsen G, Albrecht E, Amin N, Beekman M, de Geus EJ, Henders A, Nelson CP, Steves CJ, Wright MJ, de Craen AJ, Isaacs A, Matthews M, Moayyeri A, Montgomery GW, Oostra BA, Vink JM, Spector TD, Slagboom PE, Martin NG, Samani NJ, van Duijn CM, Boomsma DI. Meta-analysis of telomere length in 19 713 subjects reveals high heritability, stronger maternal inheritance and a paternal age effect. *Eur J Hum Genet*. 2013 Jan 16. doi: 10.1038/ejhg.2012.303.

Dall'olio F, Vanhooren V, Chen CC, Slagboom PE, Wuhler M, Franceschi C. N-glycomic biomarkers of biological aging and longevity: A link with inflammaging. *Ageing Res Rev*

Derhovanessian E, Maier AB, Hähnel K, Zelba H, de Craen AJ, Roelofs H, Slagboom EP, Westendorp RG, Pawelec G. Lower proportion of naïve peripheral CD8+ T cells and an unopposed pro-inflammatory response to human Cytomegalovirus proteins in vitro are associated with longer survival in very elderly people. *Age (Dordr)*. 2012 Jun 4.

Peters MJ, Broer L, Willemen HL, Eiriksdottir G, Hocking LJ, Holliday KL, Horan MA, Meulenbelt I, Neogi T, Popham M, Schmidt CO, Soni A, Valdes AM, Amin N, Dennison EM, Eijkelkamp N, Harris TB, Hart DJ, Hofman A, Huygen FJ, Jameson KA, Jones GT, Launer LJ, Kerkhof HJ, de Kruijf M, McBeth J, Kloppenburg M, Ollier WE, Oostra B, Payton A, Rivadeneira F, Smith BH, Smith AV, Stolk L, Teumer A, Thomson W, Uitterlinden AG, Wang K, van Wingerden SH, Arden NK, Cooper C, Felson D, Gudnason V, Macfarlane GJ, Pendleton N, Slagboom PE, Spector TD, Völzke H, Kavelaars A, van Duijn CM, Williams FM, van Meurs JB. Genome-wide association study meta-analysis of chronic widespread pain: evidence for involvement of the 5p15.2 region. *Ann Rheum Dis*. 2012 Sep 21.

Verschuren JJ, Boden H, Wessels JA, van der Hoeven BL, Trompet S, Heijmans BT, Putter H, Guchelaar HJ, Schaliij MJ, Jukema JW. Value of platelet pharmacogenetics in common clinical practice of patients with ST-segment elevation myocardial infarction. *Int J Cardiol*. 2012 Aug 29.

Williams FM, Bansal AT, van Meurs JB, Bell JT, Meulenbelt I, Suri P, Rivadeneira F, Sambrook PN, Hofman A, Bierma-Zeinstra S, Menni C, Kloppenburg M, Slagboom PE, Hunter DJ, Macgregor AJ, Uitterlinden AG, Spector TD. Novel genetic variants associated with lumbar disc degeneration in northern Europeans: a meta-analysis of 4600 subjects. *Ann Rheum Dis*. 2012 Sep 19.

Wijsman CA, van Heemst D, Hoogeveen ES, Slagboom PE, Maier AB, de Craen AJ, van der Ouderaa F, Pijl H, Westendorp RG, Mooijaart SP. Ambulant 24-hour glucose rhythms mark calendar and biological age in apparently healthy individuals. *Aging Cell*. 2012 Dec 26. doi: 10.1111/ace.12042.

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Albrechtsen A, Grarup N, Li Y, Sparsø T, Tian G, Cao H, Jiang T, Kim SY, Korneliusen T, Li Q, Nie C, Wu R, Skotte L, Morris AP, Ladenvall C, Cauchi S, Stančáková A, Andersen G, Astrup A, Banasik K, Bennett AJ, Bolund L, Charpentier G, Chen Y, Dekker JM, Doney AS, Dorkhan M, Forsen T, Frayling TM, Groves CJ, Gui Y, Hallmans G, Hattersley AT, He K, Hitman GA, Holmkvist J, Huang S, Jiang H, Jin X, Justesen JM, Kristiansen K, Kuusisto J, Lajer M, Lantieri O, Li W, Liang H, Liao Q, Liu X, Ma T, Ma X, Manjak MP, Marre M, Mokrosiński J, Morris AD, Mu B, Nielsen AA, Nijpels G, Nilsson P, Palmer CN, Rayner NW, Renström F, Ribel-Madsen R, Robertson N, Rolandsson O, Rossing P, Schwartz TW, Slagboom PE, Sterner M; D.E.S.I.R. Study Group, Tang M, Tarnow L; the DIAGRAM Consortium, Tuomi T, Van't Riet E, van Leeuwen N, Varga TV, Vestmar MA, Walker M, Wang B, Wang Y, Wu H, Xi F, Yengo L, Yu C, Zhang X, Zhang J, Zhang Q, Zhang W, Zheng H, Zhou Y, Altshuler D, 't Hart LM, Franks PW, Balkau B, Froguel P, McCarthy MI, Laakso M, Groop L, Christensen C, Brandslund I, Lauritzen T, Witte DR, Linneberg A, Jørgensen T, Hansen T, Wang J, Nielsen R, Pedersen O. Exome sequencing-driven discovery of coding polymorphisms associated with common metabolic phenotypes. *Diabetologia*. 2013 Feb;56(2):298-310.

Altmann-Schneider I, van der Grond J, Slagboom PE, Westendorp RG, Maier AB, van Buchem MA, de Craen AJ. Lower Susceptibility to Cerebral Small Vessel Disease in Human Familial Longevity: The Leiden Longevity Study. *Stroke*. 2013 Jan;44(1):9-14. doi: 10.1161/STROKEAHA.112.671438.

Deelen J, Uh HW, Monajemi R, van Heemst D, Thijssen PE, Bohringer S, van den Akker EB, de Craen AJ, Rivadeneira F, Uitterlinden AG, Westendorp RG, Goeman JJ, Slagboom PE, Houwing-Duistermaat JJ, Beekman M. Gene set analysis of GWAS data for human longevity highlights the relevance of the insulin/IGF-1 signaling and telomere maintenance pathways. *Age (Dordr)*. 2013 Feb;35(1):235-49. doi: 10.1007/s11357-011-9340-3.

Gunn DA, de Craen AJ, Dick JL, Tomlin CC, van Heemst D, Catt SD, Griffiths T, Ogden S, Maier AB, Murray PG, Griffiths CE, Slagboom PE, Westendorp RG. Facial Appearance Reflects Human Familial Longevity and Cardiovascular Disease Risk in Healthy Individuals. *J Gerontol A Biol Sci Med Sci*. 2013 Feb;68(2):145-52. doi: 10.1093/gerona/gls154.

Huffman DM, Deelen J, Ye K, Bergman A, Slagboom EP, Barzilai N, Atzmon G. Distinguishing Between Longevity and Buffered-Deleterious Genotypes for Exceptional Human Longevity: The Case of the MTP Gene. *J Gerontol A Biol Sci Med Sci*. 2012 Nov;67(11):1153-60. doi: 10.1093/gerona/gls103.

Noordam R, Gunn DA, Tomlin CC, Maier AB, Mooijaart SP, Slagboom PE, Westendorp RG, de Craen AJ, van Heemst D. High serum glucose levels are associated with a higher perceived age. *Age (Dordr)*. 2013 Feb;35(1):189-195.

Passtoors WM, Beekman M, Deelen J, van der Breggen R, Maier AB, Guigas B, Derhovanessian E, van Heemst D, de Craen AJ, Gunn DA, Pawelec G, Slagboom PE. Gene expression analysis of mTOR pathway: association with human longevity. *Aging Cell*. 2013 Feb;12(1):24-31. doi: 10.1111/accel.12015.

Postmus I, Trompet S, de Craen AJ, Buckley BM, Ford I, Stott DJ, Sattar N, Slagboom PE, Westendorp RG, Jukema JW. PCSK9 SNP rs11591147 is associated with low cholesterol levels but not with cognitive performance or noncardiovascular clinical events in an elderly population. *J Lipid Res*. 2013 Feb;54(2):561-6. doi: 10.1194/jlr.P033969.

Slof-Op't Landt MC, Bartels M, Middeldorp CM, van Beijsterveldt CE, Slagboom PE, Boomsma DI, van Furth EF, Meulenbelt I. Genetic Variation at the TPH2 Gene Influences Impulsivity in Addition to Eating Disorders. *Behav Genet*. 2013 Jan;43(1):24-33. doi: 10.1007/s10519-012-9569-3.

Willemsen G, Vink JM, Abdellaoui A, den Braber A, van Beek JH, Draisma HH, van Dongen J, van 't Ent D, Geels LM, van Lien R, Ligthart L, Kattenberg M, Mbarek H, de Moor MH, Neijts M, Pool R, Stroh N, Kluff C, Suchiman HE, Slagboom PE, de Geus EJ, Boomsma DI. The Adult Netherlands Twin Register: Twenty-Five Years of Survey and Biological Data Collection. *Twin Res Hum Genet*. 2013 Jan 8:1-11.

2012

Altmann-Schneider I, de Craen AJ, Slagboom PE, Westendorp RG, van Buchem MA, Maier AB, van der Grond J. Brain tissue volumes in familial longevity. The Leiden Longevity Study. *Aging Cell*. 2012 Dec;11(6):933-9. doi: 10.1111/j.1474-9726.2012.00868.x.

Barzilai N, Guarente L, Kirkwood TB, Partridge L, Rando TA, Slagboom PE. The place of genetics in ageing research. *Nat Rev Genet* 13:589-594.

Bos SD, Bovee JV, Duijnisveld BJ, Raine EV, van Dalen WJ, Ramos YF, van der Breggen R, Nelissen RG, Slagboom PE, Loughlin J, Meulenbelt I. Increased type II deiodinase protein in OA-affected cartilage and allelic imbalance of OA risk polymorphism rs225014 at DIO2 in human OA joint tissues. *Ann Rheum Dis* 71:1254-1258.

Brandys MK, Slof-Op't Landt MC, van Elburg AA, Ophoff R, Verduijn W, Meulenbelt I, Middeldorp CM, Boomsma DI, van Furth EF, Slagboom E, Kas MJ, Adan RA. Anorexia nervosa and the Val158Met polymorphism of the COMT gene: meta-analysis and new data. *Psychiatr Genet*. 22(3):130-136.

Dastani Z, Hivert MF, Timpson N, Perry JR, Yuan X, Scott RA, Henneman P, Heid IM, Kizer JR, Lytikäinen LP, Fuchsberger C, Tanaka T, Morris AP, Small K, Isaacs A, Beekman M, Coassin S, Lohman K, Qi L, Kanoni S, Pankow JS, Uh HW, Wu Y, Bidulescu A, Rasmussen-Torvik LJ, Greenwood CM, Ladouceur M, Grimsby J, Manning AK, Liu CT, Kooner J, Mooser VE, Vollenweider P, Kapur KA, Chambers J, Wareham NJ, Langenberg C, Frants R, Willem-Vandijk K, Oostra BA, Willems SM, Lamina C, Winkler TW, Psaty BM, Tracy RP, Brody J, Chen I, Viikari J, Kähönen M, Pramstaller PP, Evans DM, St Pourcain B, Sattar N, Wood AR, Bandinelli S, Carlson OD, Egan JM, Böhringer S, van Heemst D, Kedenko L, Kristiansson K, Nuotio ML, Loo BM, Harris T, Garcia M, Kanaya A, Haun M, Klopp N, Wichmann HE, Deloukas P, Katsareli E, Couper DJ, Duncan BB, Kloppenburg M, Adair LS, Borja JB; DIAGRAM+ Consortium; MAGIC Consortium; GLGC Investigators; MuTHER Consortium, Wilson JG, Musani S, Guo X, Johnson T, Semple R, Teslovich TM, Allison MA, Redline S, Buxbaum SG, Mohlke KL, Meulenbelt I, Ballantyne CM, Dedoussis GV, Hu FB, Liu Y, Paulweber B, Spector TD, Slagboom PE, Ferrucci L, Julia A, Perola M, Raitakari O, Florez JC, Salomaa V, Eriksson JG, Frayling TM, Hicks AA, Lehtimäki T, Smith GD, Siscovick DS, Kronenberg F, van Duijn C, Loos RJ, Waterworth DM, Meigs JB, Dupuis J, Richards JB, Voight BF, Scott LJ, Steinthorsdottir V, Dina C, Welch RP, Zeggini E, Huth C, Aulchenko YS, Thorleifsson G, McCulloch LJ, Ferreira T, Grallert H, Amin N, Wu G, Willer CJ, Raychaudhuri S, McCarroll SA, Hofmann OM, Segrè AV, van Hoek M, Navarro P, Ardlie K, Balkau B, Benediktsson R, Bennett AJ, Blagieva R, Boerwinkle E, Bonnycastle LL, Boström KB, Bravenboer B, Bumpstead S, Burt NP, Charpentier G, Chines PS, Cornelis M, Crawford G, Doney AS, Elliott KS, Elliott AL, Erdos MR, Fox CS, Franklin CS, Ganser M, Gieger C, Grarup N, Green T, Griffin S, Groves CJ, Guiducci C, Hadjadj S, Hassani N, Herder C, Isomaa B, Jackson AU, Johnson PR, Jørgensen T, Kao WH, Kong A, Kraft P, Kuusisto J, Lauritzen T, Li M, Lieve A, Lindgren CM, Lyssenko V, Marre M, Meisinger T, Midtjell K, Morken MA, Narisu N, Nilsson P, Owen KR, Payne F, Petersen AK, Platou C, Proença C, Prokopenko I, Rathmann W, Rayner NW, Robertson NR, Rocheleau G, Roden M, Sampson MJ, Saxena R, Shields BM, Shriver P, Sigurdsson G, Sparsø T, Strassburger K, Stringham HM, Sun Q, Swift AJ, Thorand B, Tichet J, Tuomi T, van Dam RM, van Haften TW, van Herpt T, van Vliet-Ostapchouk JV, Walters GB, Weedon MN, Wijmenga C, Witteman J, Bergman RN, Cauchi S, Collins FS, Gloy AL, Gyllenstein U, Hansen T, Hide WA, Hitman GA, Hofman A, Hunter DJ, Hveem K, Laakso M, Morris AD, Palmer CN, Rudan I, Sijbrands E, Stein LD, Tuomilehto J, Uitterlinden A, Walker M, Watanabe RM, Abecasis GR, Boehm BO, Campbell H, Daly MJ, Hattersley AT, Pedersen O, Barroso I, Groop L, Sladek R, Thorsteinsdottir U, Wilson JF, Illig T, Froguel P, van Duijn CM, Stefansson K, Altshuler D, Boehnke M, McCarthy MI, Soranzo N, Wheeler E, Glazer NL, Bouatia-Naji N, Mägi R, Randall J, Elliott P, Rybin D, DeGhan A, Hottenga JJ, Song K, Goel A, Lajunen T, Doney A, Cavalcanti-Proença C, Kumari M, Timpson NJ, Zabena C, Ingelsson E, An P, O'Connell J, Luan J, Elliott A, McCarroll SA, Roccascaccia RM, Pattou F, Sethupathy P, Ariyurek Y, Barter P, Beilby JP, Ben-Shlomo Y, Bergmann S, Bochud M, Bonnefond A, Borch-Johnsen K, Böttcher Y, Brunner E, Bumpstead SJ, Chen YD, Chines P, Clarke R, Coin LJ, Cooper MN, Crisponi L, Day IN, de Geus EJ, Delplanque J, Fedson AC, Fischer-Rosinsky A, Frouhi NG, Franzosi MG, Galan P, Goodarzi MO, Graessler J, Grundy S, Gwilliam R, Hallmans G, Hammond N, Han X, Hartikainen AL, Hayward C, Heath SC, Hercberg S, Hillman DR, Hingorani AD, Hui J, Hung J, Kaakinen M, Kaprio J, Kesaniemi YA, Kivimäki M, Knight B, Koskinen S, Kovacs P, Kyvik KO, Lathrop GM, Lawlor DA, Le Bacquer O, Lecoeur C, Li Y, Mahley R, Mangino M, Martínez-Larrad MT, McAteer JB, McPherson R, Meisinger C, Melzer D, Meyre D, Mitchell BD, Mukherjee S, Naitza S, Neville MJ, Orrù M, Pakyz R, Paolisso G, Pattaro C, Pearson D, Peden JF, Pedersen NL, Pfeiffer AF, Pichler I, Polasek O, Posthuma D, Potter SC, Pouta A, Province MA, Rayner NW, Rice K, Ripatti S, Rivadeneira F, Rolandsson O, Sandbaek A, Sandhu M, Sanna S, Sayer AA, Scheet P, Seedorf U, Sharp SJ, Shields B, Sigurdsson G, Sijbrands EJ, Silveira A, Simpson L, Singleton A, Smith NL, Sovio U, Swift A, Syddall H, Syvänen AC, Tönjes A, Uitterlinden AG, van Dijk KW, Varma D, Visvikis-Siest S, Vitart V, Vogelzangs N, Waeber G, Wagner PJ, Walley A, Ward KL, Watkins H, Wild SH, Willemsen G, Witteman JC, Yarnell JW, Zelenika D, Zethelius B, Zhai G, Zhao JH, Zillikens MC; DIAGRAM Consortium; GIANT Consortium; Global B Pgen Consortium, Borecki IB, Meneton P, Magnusson PK, Nathan DM, Williams GH, Silander K, Bornstein SR, Schwarz P, Spranger J, Karpe F, Shuldiner AR, Cooper C, Serrano-Rios M, Lind L, Palmer LJ, Hu FB 1st, Franks PW, Ebrahim S, Marmot M, Kao WH, Pramstaller PP, Wright AF, Stumvoll M, Hamsten A; Procardis Consortium, Buchanan TA, Valle TT, Rotter JI, Penninx BW, Boomsma DI, Cao A, Scuteri A, Schlessinger D, Uda M, Ruukonen A, Jarvelin MR, Peltonen L, Mooser V, Sladek R; MAGIC investigators; GLGC Consortium, Musunuru K, Smith AV, Edmondson AC, Stylianou IM, Koseki M, Pirruccello JP, Chasman DI, Johansen CT, Fouchier SW, Peloso GM, Barbalic M, Ricketts SL, Bis JC, Feitosa MF, Orho-Melander M, Melander O, Li X, Li M, Cho YS, Go MJ, Kim YJ, Lee JY, Park T, Kim K, Sim X, Ong RT, Croteau-Chonka DC, Lange LA, Smith JD, Ziegler A, Zhang W, Zee RY, Whitfield JB, Thompson JR, Surakka I, Spector TD, Smit JH, Sinisalo J, Scott J, Saharinen J, Sabatti C, Rose LM, Roberts R, Rieder M, Parker AN, Pare G, O'Donnell CJ, Nieminen MS, Nickerson DA, Montgomery GW, McArdle W, Masson D, Martin NG, Marroni F, Lucas G, Luben R, Lokki ML, Lettre G, Launer LJ, Lakatta EG, Laaksonen R, Kyvik KO, König IR, Khaw KT, Kaplan LM, Johansson Å, Janssens AC, Igl W, Hovingh GK, Hengstenberg C, Havulinna AS, Hastie ND, Harris TB, Haritunians T, Hall AS, Groop LC, Gonzalez E, Freimer NB, Erdmann J, Ejebe KG, Döring A, Dominiczak AF, Demissie S, Deloukas P, de Faire U, Crawford G, Chen YD, Caulfield MJ, Boehholdt SM, Assimes TL, Quertermous T, Seielstad M, Wong TY, Tai ES, Feranil AB, Kuzawa CW, Taylor HA Jr, Gabriel SB, Holm H, Gudnason V, Krauss RM, Ordovas JM, Munroe PB, Kooner JS, Tall AR, Hegele RA, Kastelein JJ, Schadt EE, Strachan DP, Reilly MP, Samani NJ, Schunkert H, Cupples LA, Sandhu MS, Ridker PM, Rader DJ, Kathiresan S. Novel loci for adiponectin levels and their influence on type 2 diabetes and metabolic traits: a multi-ethnic meta-analysis of 45,891 individuals. *PLoS Genet*. 2012;8(3):e1002607.

Dekker P, Meissner A, Dirks RW, Slagboom PE, van Heemst D, Deelder AM, Tanke HJ, Westendorp RG, Maier AB. Human in vivo longevity is reflected in vitro by differential metabolism as measured by (1)H-NMR profiling of cell culture supernatants. *Mol Biosyst* 8:783-789.

Dekker P, van Baalen LM, Dirks RW, Slagboom PE, van Heemst D, Tanke HJ, Westendorp RG, Maier AB. Chronic inhibition of the respiratory chain in human fibroblast cultures: differential responses related to subject chronological and biological age. *J Gerontol A Biol Sci Med Sci* 67:456-464.

van Dongen J, Slagboom PE, Draisma HH, Martin NG, Boomsma DI. The continuing value of twin studies in the omics era. *Nat Rev Genet.* Aug 14;13(9):640-53. doi: 10.1038/nrg3243.

Estrada K, Styrkarsdottir U, Evangelou E, Hsu YH, Duncan EL, Ntzani EE, Oei L, Albagha OM, Amin N, Kemp JP, Koller DL, Li G, Liu CT, Minster RL, Moayyeri A, Vandenput L, Willner D, Xiao SM, Yerges-Armstrong LM, Zheng HF, Alonso N, Eriksson J, Kammerer CM, Kaptoge SK, Leo PJ, Thorleifsson G, Wilson SG, Wilson JF, Aalto V, Alen M, Aragaki AK, Aspelund T, Center JR, Dailiana Z, Duggan DJ, Garcia M, Garcia-Giralt N, Giroux S, Hallmans G, Hocking LJ, Husted LB, Jameson KA, Khusainova R, Kim GS, Kooperberg C, Koromila T, Kruk M, Laaksonen M, Lacroix AZ, Lee SH, Leung PC, Lewis JR, Masi L, Mencej-Bedrac S, Nguyen TV, Noguez X, Patel MS, Prezelj J, Rose LM, Scollen S, Siggeirsdottir K, Smith AV, Svensson O, Trompet S, Trummer O, van Schoor NM, Woo J, Zhu K, Balcells S, Brandi ML, Buckley BM, Cheng S, Christiansen C, Cooper C, Dedoussis G, Ford I, Frost M, Goltzman D, González-Macías J, Kähönen M, Karlsson M, Khusnutdinova E, Koh JM, Kollia P, Langdahl BL, Leslie WD, Lips P, Ljunggren O, Lorenc RS, Marc J, Mellström D, Obermayer-Pietsch B, Olmos JM, Pettersson-Kymmer U, Reid DM, Riancho JA, Ridker PM, Rousseau F, Slagboom PE, Tang NL, Urreizti R, Van Hul W, Viikari J, Zarrabeitia MT, Aulchenko YS, Castano-Betancourt M, Grundberg E, Herrera L, Ingvarsson T, Johannsdottir H, Kwan T, Li R, Luben R, Medina-Gómez C, Th Palsson S, Reppe S, Rotter JI, Sigurdsson G, van Meurs JB, Verlaan D, Williams FM, Wood AR, Zhou Y, Gautvik KM, Pastinen T, Raychaudhuri S, Cauley JA, Chasman DI, Clark GR, Cummings SR, Danoy P, Dennison EM, Eastell R, Eisman JA, Gudnason V, Hofman A, Jackson RD, Jones G, Jukema JW, Khaw KT, Lehtimäki T, Liu Y, Lorentzon M, McCloskey E, Mitchell BD, Nandakumar K, Nicholson GC, Oostra BA, Peacock M, Pols HA, Prince RL, Raitakari O, Reid IR, Robbins J, Sambrook PN, Sham PC, Shuldiner AR, Tyllavsky FA, van Duijn CM, Wareham NJ, Cupples LA, Econs MJ, Evans DM, Harris TB, Kung AW, Psaty BM, Reeve J, Spector TD, Streeten EA, Zillikens MC, Thorsteinsdottir U, Ohlsson C, Karasik D, Richards JB, Brown MA, Stefansson K, Uitterlinden AG, Ralston SH, Ioannidis JP, Kiel DP, Rivadeneira F. Genome-wide meta-analysis identifies 56 bone mineral density loci and reveals 14 loci associated with risk of fracture. *Nat Genet.* 15;44(5):491-501. doi: 10.1038/ng.2249.

Heijmans BT, Mill J. Commentary: The seven plagues of epigenetic epidemiology. *Int J Epidemiol* 41:74-78.

Hogervorst T, Eilander W, Flikkers JT, Meulenbelt I. Hip Ontogenesis: How Evolution, Genes, and Load History Shape Hip Morphotype and Cartilotype. *Clin Orthop Relat Res.* 2012 Dec;470(12):3284-96. doi: 10.1007/s11999-012-2511-4.

Kerkhof HJ, Evangelou E, Meulenbelt I, van Meurs JB, Zeggini E, Valdes AM. Reply to "Human genetic studies on osteoarthritis from clinicians' viewpoints". *Osteoarthritis Cartilage* 20:250-251.

van Leeuwen N, Nijpels G, Becker ML, Deshmukh H, Zhou K, Stricker BH, Uitterlinden AG, Hofman A, van 't Riet E, Palmer CN, Guigas B, Slagboom PE, Durrington P, Calle RA, Neil A, Hitman G, Livingstone SJ, Colhoun H, Holman RR, McCarthy MI, Dekker JM, 't Hart LM, Pearson ER. A gene variant near ATM is significantly associated with metformin treatment response in type 2 diabetes: a replication and meta-analysis of five cohorts. *Diabetologia* 55:1971-1977.

Ling CH, de Craen AJ, Slagboom PE, Westendorp RG, Maier AB. Handgrip strength at midlife and familial longevity : The Leiden Longevity Study. *Age (Dordr). Age (Dordr).* 2012 Oct;34(5):1261-8.

Lu Y, Vaarhorst A, Merry AH, Dollé ME, Hovenier R, Imholz S, Schouten LJ, Heijmans BT, Müller M, Slagboom PE, van den Brandt PA, Gorgels AP, Boer JM, Feskens EJ. Markers of Endogenous Desaturase Activity and Risk of Coronary Heart Disease in the CAREMA Cohort Study. *PLoS One* 7(7):e41681.

MacArthur DG, Balasubramanian S, Frankish A, Huang N, Morris J, Walter K, Jostins L, Habegger L, Pickrell JK, Montgomery SB, Albers CA, Zhang ZD, Conrad DF, Lunter G, Zheng H, Ayub Q, DePristo MA, Banks E, Hu M, Handsaker RE, Rosenfeld JA, Fromer M, Jin M, Mu XJ, Khurana E, Ye K, Kay M, Saunders GI, Suner MM, Hunt T, Barnes IH, Amid C, Carvalho-Silva DR, Bignell AH, Snow C, Yngvadottir B, Bumpstead S, Cooper DN, Xue Y, Romero IG; 1000 Genomes Project Consortium, Wang J, Li Y, Gibbs RA, McCarroll SA, Dermitzakis ET, Pritchard JK, Barrett JC, Harrow J, Hurler ME, Gerstein MB, Tyler-Smith C. A systematic survey of loss-of-function variants in human protein-coding genes. *Science* 335(6070):823-8.

Meulenbelt I. Osteoarthritis year 2011 in review: genetics. *Osteoarthritis Cartilage* 20:218-222.

Mortensen LH, Maier AB, Slagboom PE, Pawelec G, Derhovanessian E, Petersen I, Jahn G, Westendorp RG, Christensen K. Early-life environment influencing susceptibility to cytomegalovirus infection: evidence from the Leiden

Longevity Study and the Longitudinal Study of Aging Danish Twins. *Epidemiol Infect.* May;140(5):835-41. Epub 2011 Jul 25.

Noordam R, Jansen SW, Akintola AA, Oei NY, Maier AB, Pijl H, Slagboom PE, Westendorp RG, van der Grond J, de Craen AJ, van Heemst D. Familial Longevity Is Marked by Lower Diurnal Salivary Cortisol Levels: The Leiden Longevity Study. *PLoS One* 7:e31166.

Noordam R, de Craen AJ, Pedram P, Maier AB, Mooijaart SP, van Pelt J, Feskens EJ, Streppel MT, Slagboom PE, Westendorp RG, Beekman M, van Heemst D. Levels of 25-hydroxyvitamin D in familial longevity: the Leiden Longevity Study. *CMAJ.* 2012 Dec 11;184(18):E963-8. doi: 10.1503/cmaj.120233. Epub 2012 Nov 5.

Noordam R, Gunn DA, Tomlin CC, Rozing MP, Maier AB, Slagboom PE, Westendorp RG, van Heemst D, de Craen AJ; On behalf of the Leiden Longevity Study group. Cortisol serum levels in familial longevity and perceived age: The Leiden Longevity Study. *Psychoneuroendocrinology.* 2012 Oct;37(10):1669-1675

Passtoors WM, Boer JM, Goeman JJ, van den Akker EB, Deelen J, Zwaan BJ, Scarborough A, van der Breggen R, Vossen RH, Houwing-Duistermaat JJ, van Ommen GJ, Westendorp RG, Heemst D, de Craen AJ, White AJ, Gunn DA, Beekman M, Slagboom PE. Transcriptional profiling of human familial longevity indicates a role for ASF1A and IL7R. *PLoS One* 7:e27759. Erratum in: *PLoS One.* 2012;7(5): doi/10.1371/annotation/d4d3b1fb-35e0-4c4d-89bc-e6a839504e54.

Postmus I, Verschuren JJ, de Craen AJ, Slagboom PE, Westendorp RG, Jukema JW, Trompet S. Pharmacogenetics of statins: achievements, whole-genome analyses and future perspectives. *Pharmacogenomics.* May;13(7):831-40.

van Raalte DH, van Leeuwen N, Simonis-Bik AM, Nijpels G, van Haefen TW, Schafer SA, Boomsma DI, Kramer MH, Heine J, Maassen JA, Staiger H, Machicao F, Haring HU, Slagboom PE, Willemsen G, de Geus EJ, Dekker JM, Fritsche A, Eekhoff EM, Diamant M, 't Hart LM. Glucocorticoid receptor gene polymorphisms are associated with reduced first-phase glucose-stimulated insulin secretion and disposition index in women, but not in men. *Diabet Med* 29:e211-e216.

Rius-Ottenheim N, Kromhout D, de Craen AJ, Geleijnse JM, van der Mast RC, Zitman FG, Westendorp RG, Slagboom PE, Giltay EJ. Parental longevity correlates with offspring's optimism in two cohorts of community-dwelling older subjects. *Age (Dordr)* 34:461-468.

Shiffman D, Trompet S, Louie JZ, Rowland CM, Catanese JJ, Iakoubova OA, Kirchgessner TG, Westendorp RG, de Craen AJ, Slagboom PE, Buckley BM, Stott DJ, Sattar N, Devlin JJ, Packard CJ, Ford I, Sacks FM, Jukema JW. Genome-wide study of gene variants associated with differential cardiovascular event reduction by pravastatin therapy. *PLoS One.*7(5):e38240.

Soerensen M, Dato S, Tan Q, Thinggaard M, Kleindorp R, Beekman M, Jacobsen R, Suchiman HE, de Craen AJ, Westendorp RG, Schreiber S, Stevnsner T, Bohr VA, Slagboom PE, Nebel A, Vaupel JW, Christensen K, McGue M, Christiansen L. Human longevity and variation in GH/IGF-1/insulin signaling, DNA damage signaling and repair and pro/antioxidant pathway genes: Cross sectional and longitudinal studies. *Exp Gerontol.* 47(5):379-87.

Talens RP, Jukema JW, Trompet S, Kremer D, Westendorp RG, Lumey LH, Sattar N, Putter H, Slagboom PE, Heijmans BT. Hypermethylation at loci sensitive to the prenatal environment is associated with increased incidence of myocardial infarction. *Int J Epidemiol* 41:106-115.

Talens RP, Christensen K, Putter H, Willemsen G, Christiansen L, Kremer D, Suchiman HE, Slagboom PE, Boomsma DI, Heijmans BT. Epigenetic variation during the adult lifespan: cross-sectional and longitudinal data on monozygotic twin pairs. *Aging Cell* 11:694-703.

Tobi EW, Slagboom PE, van Dongen J, Kremer D, Stein AD, Putter H, Heijmans BT, Lumey LH. Prenatal Famine and Genetic Variation Are Independently and Additively Associated with DNA Methylation at Regulatory Loci within IGF2/H19. *PLoS One.* 7(5):e37933.

Uh HW, Deelen J, Beekman M, Helmer Q, Rivadeneira F, Hottenga JJ, Boomsma DI, Hofman A, Uitterlinden AG, Slagboom PE, Böhringer S, Houwing-Duistermaat JJ. How to deal with the early GWAS data when imputing and combining different arrays is necessary. *Eur J Hum Genet.* 20(5):572-6. doi: 10.1038/ejhg.2011.231.

Vaarhorst AA, Lu Y, Heijmans BT, Dollé ME, Böhringer S, Putter H, Imholz S, Merry AH, van Greevenbroek MM, Jukema JW, Gorgels AP, van den Brandt PA, Müller M, Schouten LJ, Feskens EJ, Boer JM, Slagboom PE. Literature-based genetic risk scores for coronary heart disease: the Cardiovascular Registry Maastricht (CAREMA) prospective cohort study. *Circ Cardiovasc Genet.* 5(2):202-9.

Verschuren JJ, Trompet S, Postmus I, Sampietro ML, Heijmans BT, Houwing-Duistermaat JJ, Slagboom PE, Jukema JW. Systematic Testing of Literature Reported Genetic Variation Associated with Coronary Restenosis: Results of the GENDER Study. *PLoS One*. 7(8):e42401.

van Vliet-Ostaptchouk JV, van Haeften TW, Landman GW, Reiling E, Kleefstra N, Bilo HJ, Klungel OH, de Boer A, van Diemen CC, Wijmenga C, Boezen HM, Dekker JM, van 't Riet E, Nijpels G, Welschen LM, Zavrelova H, Bruin EJ, Elbers CC, Bauer F, Onland-Moret NC, van der Schouw YT, Grobbee DE, Spijkerman AM, van der A DL, Simonis-Bik AM, Eekhoff EM, Diamant M, Kramer MH, Boomsma DI, de Geus EJ, Willemsen G, Slagboom PE, Hofker MH, 't Hart LM. Common Variants in the Type 2 Diabetes KCNQ1 Gene Are Associated with Impairments in Insulin Secretion During Hyperglycaemic Glucose Clamp. *PLoS One* 7:e32148.

Waaiker ME, Parish WE, Strongitharm BH, van Heemst D, Slagboom PE, de Craen AJ, Sedivy JM, Westendorp RG, Gunn DA, Maier AB. The number of p16INK4a positive cells in human skin reflects biological age. *Aging Cell* 11:722-725.

Waaiker ME, Gunn DA, Catt SD, van Ginkel M, de Craen AJ, Hudson NM, van Heemst D, Slagboom PE, Westendorp RG, Maier AB. Morphometric skin characteristics dependent on chronological and biological age: the Leiden Longevity Study. *Age (Dordr)*. Dec;34(6):1543-52. doi: 10.1007/s11357-011-9314-5.

Webb BT, Guo AY, Maher BS, Zhao Z, van den Oord EJ, Kendler KS, Riley BP, Gillespie NA, Prescott CA, Middeldorp CM, Willemsen G, de Geus EJ, Hottenga JJ, Boomsma DI, Slagboom EP, Wray NR, Montgomery GW, Martin NG, Wright MJ, Heath AC, Madden PA, Gelernter J, Knowles JA, Hamilton SP, Weissman MM, Fyer AJ, Huezio-Diaz P, McGuffin P, Farmer A, Craig IW, Lewis C, Sham P, Crowe RR, Flint J, Hottenga JM. Meta-analyses of genome-wide linkage scans of anxiety-related phenotypes. *Eur J Hum Genet*. Oct;20(10):1078-84. doi: 10.1038/ejhg.2012.47.

Wijsman CA, van Opstal AM, Kan HE, Maier AB, Westendorp RG, Slagboom PE, Webb AG, Mooijaart SP, van Heemst D. Proton magnetic resonance spectroscopy shows lower intramyocellular lipid accumulation in middle-aged subjects predisposed to familial longevity. *Am J Physiol Endocrinol Metab* 302:E344-E348.

Zhang Y, Lameijer EW, 't Hoen PA, Ning Z, Slagboom PE, Ye K. PASSion: a pattern growth algorithm-based pipeline for splice junction detection in paired-end RNA-Seq data. *Bioinformatics* 28:479-486.

Zeggini E, Panoutsopoulou K, Southam L, Day-Williams AG, Lopes MC, Boraska V, Beazley C, Blackburn H, Bumpstead S, Hunt SE, Potter SC, Shin SY, Yadav VK, Deloukas P, Southam L, Rayner NW, Lopes M, Elliott KS, Rayner NW, Boraska V, Esko T, Metspalu A, Esko T, Metspalu A, Esko T, Metspalu A, Evangelou E, Ioannidis JP, Hofman A, Kerkhof HJ, Rivadeneira F, Uitterlinden AG, van Meurs JB, Houwing-Duistermaat JJ, Kloppenburg M, Bos SD, Slagboom PE, Meulenbelt I, Ingvarsson T, Ingvarsson T, Jonsdottir I, Jonsson H, Stefansson K, Jonsdottir I, Thorleifsson G, Stefansson K, Stykarsdottir U, Mangino M, Metrustry S, Zhai G, O'Neill F, Valdes AM, Spector TD, Raine EV, Ratnayake M, Birrell F, McCaskie A, Loughlin J, Ricketts M, Koller NC, Salter D, Ralston SH, Zhai G, Sherburn K, Dixon K, Ollier WE, Arden E, Battley PK, Aslam N, Joseph J, Rai A, Carluke I, Reed MR, Walker K, Birrell F, Doherty S, Wheeler M, Doherty M, Gordon A, Paling E, Swift D, Wilkinson JM, Keen R, Mitchell S, McCaskie A, Paling E, Swift D, Wilkinson JM, Watkins B, Chapman K, Arden N, Carr A, Ioannidis PA, Wallis GA, Arden N; arcOGEN Consortium and arcOGEN Collaborators. Identification of new susceptibility loci for osteoarthritis (arcOGEN): a genome-wide association study. *Lancet*. Sep 1;380(9844):815-23.

2011

van den Akker EB, Verbruggen B, Heijmans BT, Beekman M, Kok JN, Slagboom PE, Reinders MJ. Integrating protein-protein interaction networks with gene-gene co-expression networks improves gene signatures for classifying breast cancer metastasis. *J Integr Bioinform* 8(2):188.

van Beijsterveldt CE, Middeldorp CM, Slof-Op't Landt MC, Bartels M, Hottenga JJ, Suchiman HE, Slagboom PE, Boomsma DI. Influence of candidate genes on attention problems in children: a longitudinal study. *Behav Genet* 41:155-164.

Bijsterbosch J, van Bemmel JM, Watt I, Meulenbelt I, Rosendaal FR, Huizinga TW, Kloppenburg M. Systemic and local factors are involved in the evolution of erosions in hand osteoarthritis. *Ann Rheum Dis* 70:326-330.

Bijsterbosch J, Watt I, Meulenbelt I, Rosendaal FR, Huizinga TW, Kloppenburg M. Clinical and radiographic disease course of hand osteoarthritis and determinants of outcome after 6 years. *Ann Rheum Dis* 70:68-73.

Deelen J, Beekman M, Uh HW, Helmer Q, Kuningas M, Christiansen L, Kremer D, van der Breggen R, Suchiman HE, Lakenberg N, van den Akker EB, Passtoors WM, Tiemeier H, van Heemst D, de Craen AJ, Rivadeneira F, de Geus EJ, Perola M, van der Ouderaa FJ, Gunn DA, Boomsma DI, Uitterlinden AG, Christensen K, van Duijn CM, Heijmans BT, Houwing-Duistermaat JJ, Westendorp RG, Slagboom PE. Genome-wide association study identifies a single major locus contributing to survival into old age; the APOE locus revisited. *Aging Cell* 10:686-698.

Derhovanessian E, Maier AB, Hahnel K, Beck R, de Craen AJ, Slagboom EP, Westendorp RG, Pawelec G. Infection with cytomegalovirus but not herpes simplex virus induces the accumulation of late-differentiated CD4+ and CD8+ T-cells in humans. *J Gen Virol* 92:2746-2756.

Euser AM, Finken MJ, Kharagjitsingh AV, Alizadeh BZ, Roep BO, Meulenbelt I, Dekker FW, Wit JM. IGF1 Promoter Polymorphism and Cranial Growth in Individuals Born Very Preterm. *Horm Res Paediatr* 76:27-34.

Evangelou E, Valdes AM, Kerkhof HJ, Styrkarsdottir U, Zhu Y, Meulenbelt I, Lories RJ, Karassa FB, Tylzanowski P, Bos SD, Akune T, Arden NK, Carr A, Chapman K, Cupples LA, Dai J, Deloukas P, Doherty M, Doherty S, Engstrom G, Gonzalez A, Halldorsson BV, Hammond CL, Hart DJ, Helgadottir H, Hofman A, Ikegawa S, Ingvarsson T, Jiang Q, Jonsson H, Kaprio J, Kawaguchi H, Kisand K, Kloppenburg M, Kujala UM, Lohmander LS, Loughlin J, Luyten FP, Mabuchi A, McCaskie A, Nakajima M, Nilsson PM, Nishida N, Ollier WE, Panoutsopoulou K, van de Putte T, Ralston SH, Rivadeneira F, Saarela J, Schulte-Merker S, Shi D, Slagboom PE, Sudo A, Tamm A, Tamm A, Thorleifsson G, Thorsteinsdottir U, Tsezou A, Wallis GA, Wilkinson JM, Yoshimura N, Zeggini E, Zhai G, Zhang F, Jonsdottir I, Uitterlinden AG, Felson DT, van Meurs JB, Stefansson K, Ioannidis JP, Spector TD. Meta-analysis of genome-wide association studies confirms a susceptibility locus for knee osteoarthritis on chromosome 7q22. *Ann Rheum Dis* 70:349-355.

Finken MJ, Meulenbelt I, Dekker FW, Frolich M, Walther FJ, Romijn JA, Slagboom PE, Wit JM. Abdominal fat accumulation in adults born preterm exposed antenatally to maternal glucocorticoid treatment is dependent on glucocorticoid receptor gene variation. *J Clin Endocrinol Metab* 96:E1650-E1655.

Freeman DJ, Robertson M, Brown EA, Rumley A, Tobias ES, Frolich M, Slagboom PE, Jukema JW, de Craen AJ, Sattar N, Ford I, Gaw A, Greer IA, Lowe GD, Stott DJ. Incident venous thromboembolic events in the Prospective Study of Pravastatin in the Elderly at Risk (PROSPER). *BMC Geriatr* 11:8.

Güler-Yüksel M, Bijsterbosch J, Allaart CF, Meulenbelt I, Kroon HM, Watt I, Lems WF, Kloppenburg M. Accelerated metacarpal bone mineral density loss is associated with radiographic progressive hand osteoarthritis. *Ann Rheum Dis* 70:1625-1630.

Kerkhof HJ, Doherty M, Arden NK, Abramson SB, Attur M, Bos SD, Cooper C, Dennison EM, Doherty SA, Evangelou E, Hart DJ, Hofman A, Javadi K, Kerna I, Kisand K, Kloppenburg M, Krasnokutsky S, Maciewicz RA, Meulenbelt I, Muir KR, Rivadeneira F, Samuels J, Sezgin M, Slagboom E, Smith AJ, Spector TD, Tamm A, Tamm A, Uitterlinden AG, Wheeler M, Zhai G, Zhang W, van Meurs JB, Valdes AM. Large-scale meta-analysis of interleukin-1 beta and interleukin-1 receptor antagonist polymorphisms on risk of radiographic hip and knee osteoarthritis and severity of knee osteoarthritis. *Osteoarthritis Cartilage* 19:265-271.

Kerkhof HJ, Meulenbelt I, Akune T, Arden NK, Aromaa A, Bierma-Zeinstra SM, Carr A, Cooper C, Dai J, Doherty M, Doherty SA, Felson D, Gonzalez A, Gordon A, Harilainen A, Hart DJ, Hauksson VB, Heliovaara M, Hofman A, Ikegawa S, Ingvarsson T, Jiang Q, Jonsson H, Jonsdottir I, Kawaguchi H, Kloppenburg M, Kujala UM, Lane NE, Leino-Arjas P, Lohmander LS, Luyten FP, Malizos KN, Nakajima M, Nevitt MC, Pols HA, Rivadeneira F, Shi D, Slagboom E, Spector TD, Stefansson K, Sudo A, Tamm A, Tamm AE, Tsezou A, Uchida A, Uitterlinden AG, Wilkinson JM, Yoshimura N, Valdes AM, van Meurs JB. Recommendations for standardization and phenotype definitions in genetic studies of osteoarthritis: the TREAT-OA consortium. *Osteoarthritis Cartilage* 19:254-264.

Kwok WY, Bijsterbosch J, Malm SH, Biermasz NR, Huetink K, Nelissen RG, Meulenbelt I, Huizinga TW, van 't Klooster R, Stoel BC, Kloppenburg M. Validity of joint space width measurements in hand osteoarthritis. *Osteoarthritis Cartilage* 19:1349-1355.

Ling CH, de Craen AJ, Slagboom PE, Gunn DA, Stokkel MP, Westendorp RG, Maier AB. Accuracy of direct segmental multi-frequency bioimpedance analysis in the assessment of total body and segmental body composition in middle-aged adult population. *Clin Nutr* 30:610-615.

Long Q, Jeffares DC, Zhang Q, Ye K, Nizhynska V, Ning Z, Tyler-Smith C, Nordborg M. PoolHap: inferring haplotype frequencies from pooled samples by next generation sequencing. *PLoS One* 6:e15292.

Martella F, Vermunt JK, Beekman M, Westendorp RG, Slagboom PE, Houwing-Duistermaat JJ. A mixture model with random-effects components for classifying sibling pairs. *Stat Med* 30:3252-3264.

Meulenbelt I, Bos SD, Chapman K, van der Breggen R, Houwing-Duistermaat JJ, Kremer D, Kloppenburg M, Carr A, Tsezou A, Gonzalez A, Loughlin J, Slagboom PE. Meta-analyses of genes modulating intracellular T3 bio-availability reveal a possible role for the DIO3 gene in osteoarthritis susceptibility. *Ann Rheum Dis* 70:164-167.

Meulenbelt I, Kraus VB, Sandell LJ, Loughlin J. Summary of the OA biomarkers workshop 2. *Osteoarthritis Cartilage* 19:1091-1094.

Mills RE, Walter K, Stewart C, Handsaker RE, Chen K, Alkan C, Abyzov A, Yoon SC, Ye K, Cheetham RK, Chinwalla A, Conrad DF, Fu Y, Grubert F, Hajirasouliha I, Hormozdiari F, Iakoucheva LM, Iqbal Z, Kang S, Kidd JM, Konkel MK, Korn J, Khurana E, Kural D, Lam HY, Leng J, Li R, Li Y, Lin CY, Luo R, Mu XJ, Nemesh J, Peckham HE, Rausch T, Scally A, Shi X, Stromberg MP, Stutz AM, Urban AE, Walker JA, Wu J, Zhang Y, Zhang ZD, Batzer MA, Ding L, Marth GT, McVean G, Sebat J, Snyder M, Wang J, Ye K, Eichler EE, Gerstein MB, Hurles ME, Lee C, McCarroll SA, Korbel JO. Mapping copy number variation by population-scale genome sequencing. *Nature* 470:59-65.

Mooijaart SP, van Heemst D, Noordam R, Rozing MP, Wijsman CA, de Craen AJ, Westendorp RG, Beekman M, Slagboom PE. Polymorphisms associated with type 2 diabetes in familial longevity: The Leiden Longevity Study. *Aging (Albany NY)* 3:55-62.

Panoutsopoulou K, Southam L, Elliott KS, Wrayner N, Zhai G, Beazley C, Thorleifsson G, Arden NK, Carr A, Chapman K, Deloukas P, Doherty M, McCaskie A, Ollier WE, 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 VB, Hofman A, Hunt SE, Ioannidis JP, Ingvarsson T, Jonsdottir I, Jonsson H, Keen R, Kerkhof HJ, 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 JB, Watkins B, Wheeler M, Mitchell S, Zhu Y, Zmuda JM, Zeggini E, Loughlin J. Insights into the genetic architecture of osteoarthritis from stage 1 of the arcOGEN study. *Ann Rheum Dis* 70:864-867.

Pons D, Trompet S, de Craen AJ, Thijssen PE, Quax PH, de Vries MR, Wierda RJ, van den Elsen PJ, Monraats PS, Ewing MM, Heijmans BT, Slagboom PE, Zwinderman AH, Doevendans PA, Tio RA, de Winter RJ, de Maat MP, Iakoubova OA, Sattar N, Shepherd J, Westendorp RG, Jukema JW. Genetic variation in PCAF, a key mediator in epigenetics, is associated with reduced vascular morbidity and mortality: evidence for a new concept from three independent prospective studies. *Heart* 97:143-150.

Rius-Ottenheim N, de Craen AJ, Geleijnse JM, Slagboom PE, Kromhout D, van der Mast RC, Zitman FG, Westendorp RG, Giltay EJ. 2012. C-reactive protein haplotypes and dispositional optimism in obese and nonobese elderly subjects. *Inflamm Res* 61:43-51.

Rozing MP, Mooijaart SP, Beekman M, Wijsman CA, Maier AB, Bartke A, Westendorp RG, Slagboom EP, van Heemst D. C-reactive protein and glucose regulation in familial longevity. *Age (Dordr)* 33:623-630.

Ruhaak LR, Uh HW, Beekman M, Hokke CH, Westendorp RG, Houwing-Duistermaat J, Wuhler M, Deelder AM, Slagboom PE. Plasma protein N-glycan profiles are associated with calendar age, familial longevity and health. *J Proteome Res* 10:1667-1674.

Sampietro ML, Trompet S, Verschuren JJ, Talens RP, Deelen J, Heijmans BT, de Winter RJ, Tio RA, Doevendans PA, Ganesh SK, Nabel EG, Westra HJ, Franke L, van den Akker EB, Westendorp RG, Zwinderman AH, Kastrati A, Koch W, Slagboom PE, de Knijff P, Jukema JW. A genome-wide association study identifies a region at chromosome 12 as a potential susceptibility locus for restenosis after Percutaneous Coronary Intervention. *Hum Mol Genet*. Dec 1;20(23):4748-57

Saviouk V, Hottenga JJ, Slagboom EP, Distel MA, de Geus EJ, Willemsen G, Boomsma DI. ADHD in Dutch adults: heritability and linkage study. *Am J Med Genet B Neuropsychiatr Genet* 156B:352-362.

Slagboom PE, Beekman M, Passtoors WM, Deelen J, Vaarhorst AA, Boer JM, van den Akker EB, van Heemst D, de Craen AJ, Maier AB, Rozing M, Mooijaart SP, Heijmans BT, Westendorp RG. Genomics of human longevity. *Philos Trans R Soc Lond B Biol Sci* 366:35-42.

Slof-Op 't Landt MC, Meulenbelt I, Bartels M, Suchiman E, Middeldorp CM, Houwing-Duistermaat JJ, van Tj, Onkenhout EJ, Vink JM, van Beijsterveldt CE, Brandys MK, Sanders N, Zipfel S, Herzog W, Herpertz-Dahlmann B, Klampfl K, Fleischhaker C, Zeeck A, de ZM, Herpertz S, Ehrlich S, van Elburg AA, Adan RA, Scherag S, Hinney A, Hebebrand J, Boomsma DI, van Furth EF, Slagboom PE. Association study in eating disorders: TPH2 associates with anorexia nervosa and self-induced vomiting. *Genes Brain Behav* 10:236-243.

Skytthe A, Valensin S, Jeune B, Cevenini E, Balard F, Beekman M, Bezrukov V, Blanche H, Bolund L, Broczek K, Carru C, Christensen K, Christiansen L, Collerton JC, Cotichini R, de Craen AJ, Dato S, Davies K, de BG, Deiana L, Flachsbarth F, Gampe J, Gilbault C, Gonos ES, Haines E, Hervonen A, Hurme MA, Janiszewska D, Jylha M, Kirkwood TB, Kristensen P, Laiho P, Leon A, Marchisio A, Masciulli R, Nebel A, Passarino G, Pelicci G, Peltonen L, Perola M, Poulain M, Rea IM, Remacle J, Robine JM, Schreiber S, Scurti M, Sevini F, Sikora E, Skouteri A, Slagboom PE, Spazzafumo L, Stazi MA, Tucciaceli V, Toussaint O, Tornwall O, Vaupel JW, Voutetakis K, Franceschi C. 2011. Design, recruitment, logistics, and data management of the GEHA (Genetics of Healthy Ageing) project. *Exp Gerontol* 46:934-945.

Smith NL, Huffman JE, Strachan DP, Huang J, Dehghan A, Trompet S, Lopez LM, Shin SY, Baumert J, Vitart V, Bis JC, Wild SH, Rumley A, Yang Q, Uitterlinden AG, Stott DJ, Davies G, Carter AM, Thorand B, Polasek O, McKnight B, Campbell H, Rudnicka AR, Chen MH, Buckley BM, Harris SE, Peters A, Pulanic D, Lumley T, de Craen AJ, Liewald DC, Gieger C, Campbell S, Ford I, Gow AJ, Luciano M, Porteous DJ, Guo X, Sattar N, Tenesa A, Cushman M, Slagboom PE, Visscher PM, Spector TD, Illig T, Rudan I, Bovill EG, Wright AF, McArdle WL, Tofler G, Hofman A, Westendorp RG, Starr JM, Grant PJ, Karakas M, Hastie ND, Psaty BM, Wilson JF, Lowe GD, O'Donnell CJ, Witteman JC, Jukema JW, Deary IJ, Soranzo N, Koenig W, Hayward C. Genetic predictors of fibrin D-dimer levels in healthy adults. *Circulation* 123:1864-1872.

Tobi EW, Heijmans BT, Kremer D, Putter H, Deleamarre-van de Waal HA, Finken MJ, Wit JM, Slagboom PE. DNA methylation of IGF2, GNASAS, INSIGF and LEP and being born small for gestational age. *Epigenetics* 6:171-176.

Trompet S, de Craen AJ, Jukema JW, Pons D, Slagboom PE, Kremer D, Bollen EL, Westendorp RG. Variation in the CBP gene involved in epigenetic control associates with cognitive function. *Neurobiol Aging* 32:549-8.

Trompet S, Pons D, Kanse SM, de Craen AJ, Ikram MA, Verschuren JJ, Zwinderman AH, Doevendans PA, Tio RA, de Winter RJ, Slagboom PE, Westendorp RG, Jukema JW. Factor VII Activating Protease Polymorphism (G534E) Is Associated with Increased Risk for Stroke and Mortality. *Stroke Res Treat* 2011:424759.

Trompet S, de Craen AJ, Postmus I, Ford I, Sattar N, Caslake M, Stott DJ, Buckley BM, Sacks F, Devlin JJ, Slagboom PE, Westendorp RG, Jukema JW. Replication of LDL GWAs hits in PROSPER/PHASE as validation for future (pharmaco) genetic analyses. *BMC Med Genet.* 2011 Oct 6;12:131

Vaarhorst AA, Beekman M, Suchiman EH, van Heemst D, Houwing-Duistermaat JJ, Westendorp RG, Slagboom PE, Heijmans BT. Lipid metabolism in long-lived families: the Leiden Longevity Study. *Age (Dordr)* 33:219-227.

Waarsing JH, Kloppenburg M, Slagboom PE, Kroon HM, Houwing-Duistermaat JJ, Weinans H, Meulenbelt I. Osteoarthritis susceptibility genes influence the association between hip morphology and osteoarthritis. *Arthritis Rheum* 63:1349-1354.

Wassenaar MJ, Biermasz NR, Bijsterbosch J, Pereira AM, Meulenbelt I, Smit JW, Roelfsema F, Kroon HM, Romijn JA, Kloppenburg M. Arthropathy in long-term cured acromegaly is characterised by osteophytes without joint space narrowing: a comparison with generalised osteoarthritis. *Ann Rheum Dis* 70:320-325.

Wijsman CA, Rozing MP, Streefland TC, le Cessie S, Mooijaart SP, Slagboom PE, Westendorp RG, Pijl H, van Heemst D. Familial longevity is marked by enhanced insulin sensitivity. *Aging Cell* 10:114-121.

Wijsman CA, van Heemst D, Rozing MP, Slagboom PE, Beekman M, de Craen AJ, Maier AB, Westendorp RG, Blom HJ, Mooijaart SP. Homocysteine and familial longevity: the Leiden Longevity Study. *PLoS One* 6:e17543.

Yusuf E, Bijsterbosch J, Slagboom PE, Kroon HM, Rosendaal FR, Huizinga TW, Kloppenburg M. Association between several clinical and radiological determinants with long-term clinical progression and good prognosis of lower limb osteoarthritis. *PLoS One* 6:e25426.

Yusuf E, Bijsterbosch J, Slagboom PE, Rosendaal FR, Huizinga TW, Kloppenburg M. Body mass index and alignment and their interaction as risk factors for progression of knees with radiographic signs of osteoarthritis. *Osteoarthritis Cartilage* 19:1117-1122.

Yusuf E, Ioan-Facsinay A, Bijsterbosch J, Klein-Wieringa I, Kwekkeboom J, Slagboom PE, Huizinga TW, Kloppenburg M. Association between leptin, adiponectin and resistin and long-term progression of hand osteoarthritis. *Ann Rheum Dis* 70:1282-1284.

2010

't Hart LM, Simonis-Bik AM, Nijpels G, van Haefen TW, Schafer SA, Houwing-Duistermaat JJ, Boomsma DI, Groenewoud MJ, Reiling E, van Hove EC, Diamant M, Kramer MH, Heine RJ, Maassen JA, Kirchhoff K, Machicao F, Haring HU, Slagboom PE, Willemsen G, Eekhoff EM, de Geus EJ, Dekker JM, Fritsche A. Combined risk allele score of eight type 2 diabetes genes is associated with reduced first-phase glucose-stimulated insulin secretion during hyperglycemic clamps. *Diabetes* 59:287-292.

Beekman M, Nederstigt C, Suchiman HE, Kremer D, van der Breggen, Lakenberg N, Alemayehu WG, de Craen AJ, Westendorp RG, Boomsma DI, de Geus EJ, Houwing-Duistermaat JJ, Heijmans BT, Slagboom PE. Genome-wide association study (GWAS)-identified disease risk alleles do not compromise human longevity. *Proc Natl Acad Sci U S A* 107:18046-18049.

Bijsterbosch J, Watt I, Meulenbelt I, Rosendaal FR, Huizinga TW, Kloppenburg M Clinical burden of erosive hand osteoarthritis and its relationship to nodes. *Ann Rheum Dis.* 69:1784-1788

Bijsterbosch J, Visser W, Kroon HM, Stamm T, Meulenbelt I, Huizinga TW, Kloppenburg M Thumb base involvement in symptomatic hand osteoarthritis is associated with more pain and functional disability. *Ann Rheum Dis* 69:585-587.

Bijsterbosch J, Wassenaar MJ, le Cessie S, Slagboom PE, Rosendaal FR, Huizinga TW, Kloppenburg M Doyle Index is a valuable additional pain measure in osteoarthritis. *Osteoarthritis Cartilage* 18:1046-1050.

Bos SD, Lakenberg N, van der Breggen, Houwing-Duistermaat JJ, Kloppenburg M, de Craen AJ, Beekman M, Meulenbelt I, Slagboom PE A genome-wide linkage scan reveals CD53 as an important regulator of innate TNF-alpha levels. *Eur J Hum Genet* 18:953-959.

Caliebe A, Kleindorp R, Blanche H, Christiansen L, Puca AA, Rea IM, Slagboom E, Flachsbart F, Christensen K, Rimbach G, Schreiber S, Nebel A. No or only population-specific effect of PON1 on human longevity: a comprehensive meta-analysis. *Ageing Res Rev* 9:238-244.

Callegaro A, Meulenbelt I, Kloppenburg M, Slagboom PE, Houwing-Duistermaat JJ. Allele-sharing statistics using information on family history. *Ann Hum Genet* 74:547-554.

Derhovanessian E, Maier AB, Beck R, Jahn G, Hahnel K, Slagboom PE, de Craen AJ, Westendorp RG, Pawelec G. Hallmark features of immunosenescence are absent in familial longevity. *J Immunol* 185:4618-4624.

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 JP, Kloppenburg M, Lane NE, Loughlin J, Luyten FP, Nevitt MC, Parimi N, Pols HA, Rivadeneira F, Slagboom EP, Stykkarsdottir U, Tsezou A, van de Putte T, Zmuda J, Spector TD, Stefansson K, Uitterlinden AG, van Meurs JB A genome-wide association study identifies an osteoarthritis susceptibility locus on chromosome 7q22. *Arthritis Rheum* 62:499-510.

Kerkhof HJ, Meulenbelt I, Carr A, Gonzalez A, Hart D, Hofman A, Kloppenburg M, Lane NE, Loughlin J, Nevitt MC, Pols HA, Rivadeneira F, Slagboom EP, Spector TD, Stolk L, Tsezou A, Uitterlinden AG, Valdes AM, van Meurs JB Common genetic variation in the Estrogen Receptor Beta (ESR2) gene and osteoarthritis: results of a meta-analysis. *BMC Med Genet* 11:164.

Kuningas M, van Bodegom D., May L, Meij JJ, Slagboom PE, Westendorp RG Common CFTR gene variants influence body composition and survival in rural Ghana. *Hum Genet* 127:201-206.

Lu Y, Feskens EJ, Boer JM, Imholz S, Verschuren WM, Wijmenga C, Vaarhorst A, Slagboom E, Muller M, Dolle ME Exploring genetic determinants of plasma total cholesterol levels and their predictive value in a longitudinal study. *Atherosclerosis* 213:200-205.

May L, Kuningas M, van Bodegom D, Meij HJ, Frolich M, Slagboom PE, Mantovani A, Westendorp RG Genetic variation in pentraxin (PTX) 3 gene associates with PTX3 production and fertility in women. *Biol Reprod* 82:299-304.

May L, van Bodegom D, Frolich M, van Lieshout L, Slagboom PE, Westendorp RG, Kuningas M Polymorphisms in TLR4 and TLR2 genes, cytokine production and survival in rural Ghana. *Eur J Hum Genet* 18:490-495.

Meulenbelt I, Bos SD, Kloppenburg M, Lakenberg N, Houwing-Duistermaat JJ, Watt I, de Craen AJ, van Duijn CM, Slagboom PE Interleukin-1 gene cluster variants with innate cytokine production profiles and osteoarthritis in subjects from the Genetics, Osteoarthritis and Progression Study. *Arthritis Rheum* 62:1119-1126.

Middeldorp CM, Slof-Op 't Landt MC, Medland SE, Beijsterveldt CE, Bartels M, Willemsen G, Hottenga JJ, Geus EJ, Suchiman HE, Dolan CV, Neale MC, Slagboom PE, Boomsma DI. Anxiety and depression in children and adults: influence of serotonergic and neurotrophic genes? *Genes Brain Behav.* 9:808-816

Moxley G, Meulenbelt I, Chapman K, van Duijn CM, Slagboom PE, Neale MC, Smith AJ, Carr AJ, Loughlin J. Interleukin-1 region meta-analysis with osteoarthritis phenotypes. *Osteoarthritis Cartilage* 18:200-207.

Newman AB, Walter S, Lunetta KL, Garcia ME, Slagboom PE, Christensen K, Arnold AM, Aspelund T, Aulchenko YS, Benjamin EJ, Christiansen L, D'Agostino RB, Sr., Fitzpatrick AL, Franceschini N, Glazer NL, Gudnason V, Hofman A, Kaplan R, Karasik D, Kelly-Hayes M, Kiel DP, Launer LJ, Marcante KD, Massaro JM, Miljkovic I, Nalls MA, Hernandez D, Psaty BM, Rivadeneira F, Rotter J, Seshadri S, Smith AV, Taylor KD, Tiemeier H, Uh HW, Uitterlinden AG, Vaupel JW, Walston J, Westendorp RG, Harris TB, Lumley T, van Duijn CM, Murabito JM A meta-analysis of four genome-wide

association studies of survival to age 90 years or older: the Cohorts for Heart and Aging Research in Genomic Epidemiology Consortium. *J Gerontol A Biol Sci Med Sci* 65:478-487.

Reiling E, Jafar-Mohammadi B, van 't Riet E, Weedon MN, van Vliet-Ostaptchouk JV, Hansen T, Saxena R, van Haeften TW, Arp PA, Das S, Nijpels G, Groenewoud MJ, van Hove EC, Uitterlinden AG, Smit JW, Morris AD, Doney AS, Palmer CN, Guiducci C, Hattersley AT, Frayling TM, Pedersen O, Slagboom PE, Altshuler DM, Groop L, Romijn JA, Maassen JA, Hofker MH, Dekker JM, McCarthy MI, 't Hart LM Genetic association analysis of LARS2 with type 2 diabetes. *Diabetologia* 53:103-110.

Rozing MP, Westendorp RG, de Craen AJ, Frolich M, Heijmans BT, Beekman M, Wijsman C, Mooijaart SP, Blauw GJ, Slagboom PE, van Heemst D. Low serum free triiodothyronine levels mark familial longevity: the Leiden Longevity Study. *J Gerontol A Biol Sci Med Sci* 65:365-368.

Rozing MP, Westendorp RG, de Craen AJ, Frolich M, de Goeij MC, Heijmans BT, Beekman M, Wijsman CA, Mooijaart SP, Blauw GJ, Slagboom PE, van Heemst D. Favorable glucose tolerance and lower prevalence of metabolic syndrome in offspring without diabetes mellitus of nonagenarian siblings: the Leiden longevity study. *J Am Geriatr Soc* 58:564-569.

Rozing MP, Houwing-Duistermaat JJ, Slagboom PE, Beekman M, Frolich M, de Craen AJ, Westendorp RG, van Heemst D. Familial Longevity Is Associated with Decreased Thyroid Function. *J Clin Endocrinol Metab.* 95:4979-4984

Ruhaak LR, Uh HW, Beekman M, Koeleman CA, Hokke CH, Westendorp RG, Wuhler M, Houwing-Duistermaat JJ, Slagboom PE, Deelder AM Decreased levels of bisecting GlcNAc glycoforms of IgG are associated with human longevity. *PLoS One* 5:e12566.

Simonis-Bik AM, Nijpels G, van Haeften TW, Houwing-Duistermaat JJ, Boomsma DI, Reiling E, van Hove EC, Diamant M, Kramer MH, Heine RJ, Maassen JA, Slagboom PE, Willemsen G, Dekker JM, Eekhoff EM, de Geus EJ, 't Hart LM Gene variants in the novel type 2 diabetes loci CDC123/CAMK1D, THADA, ADAMTS9, BCL11A, and MTNR1B affect different aspects of pancreatic beta-cell function. *Diabetes* 59:293-301.

Talens RP, Boomsma DI, Tobi EW, Kremer D, Jukema JW, Willemsen G, Putter H, Slagboom PE, Heijmans BT Variation, patterns, and temporal stability of DNA methylation: considerations for epigenetic epidemiology. *FASEB J* 24:3135-3144.

Terracciano A, Sanna S, Uda M, Deiana B, Usala G, Busonero F, Maschio A, Scally M, Patriciu N, Chen WM, Distel MA, Slagboom EP, Boomsma DI, Villafuerte S, Sliwerska E, Burmeister M, Amin N, Janssens AC, van Duijn CM, Schlessinger D, Abecasis GR, Costa PT, Jr Genome-wide association scan for five major dimensions of personality. *Mol Psychiatry* 15:647-656.

Trompet S, Craen AJ, Jukema JW, Pons D, Slagboom PE, Kremer D, Bollen EL, Westendorp RG Variation in the CBP gene involved in epigenetic control associates with cognitive function. *Neurobiol Aging*.

Tufan A, Meulenbelt I, Bijsterbosch J, Kroon HM, Bierma-Zeinstra SM, Nelissen RG, Kloppenburg M Familial influence on tibiofemoral alignment. *Ann Rheum Dis* 69:542-545.

Vaarhorst AA, Beekman M, Suchiman HE, van Heemst D, Houwing-Duistermaat JJ, Westendorp RG, Slagboom PE, Heijmans BT Lipid metabolism in long-lived families: the Leiden Longevity Study. *Age (Dordr)* 11 Jun;33(2):219-27.

Willemsen G, de Geus EJ, Bartels M, van Beijsterveldt CE, Brooks AI, Estourgie-van Burk GF, Fugman DA, Hoekstra C, Hottenga JJ, Kluff K, Meijer P, Montgomery GW, Rizzu P, Sondervan D, Smit AB, Spijker S, Suchiman HE, Tischfield JA, Lehner T, Slagboom PE, Boomsma DI The Netherlands Twin Register biobank: a resource for genetic epidemiological studies. *Twin Res Hum Genet* 13:231-245.

2009

Albers HM, Kurreeman FA, Stoeken-Rijsbergen G, Brinkman DM, Kamphuis SS, van Rossum MA, Girschick HJ, Wouters C, Saurenmann RK, Hoppenreijns E, Slagboom P, Houwing-Duistermaat JJ, Verduijn W, Huizinga TW, Ten CR, Toes RE, Schilham MW Association of the autoimmunity locus 4q27 with juvenile idiopathic arthritis. *Arthritis Rheum* 60:901-904.

Bijsterbosch J, Scharloo M, Visser AW, Watt I, Meulenbelt I, Huizinga TW, Kaptein AA, Kloppenburg M Illness perceptions in patients with osteoarthritis: change over time and association with disability. *Arthritis Rheum* 61:1054-1061.

Bijsterbosch J, Visser W, Kroon HM, Stamm T, Meulenbelt I, Huizinga TW, Kloppenburg M Thumb base involvement in symptomatic hand osteoarthritis is associated with more pain and functional disability. *Ann Rheum Dis*.

Bos SD, Kloppenburg M, Suchiman HE, van BE, Slagboom PE, Meulenbelt I The role of plasma cytokine levels, CRP and Selenoprotein S gene variation in OA. *Osteoarthritis Cartilage* 17:621-626.

Botha-Scheepers S, Riyazi N, Watt I, Rosendaal FR, Slagboom E, Bellamy N, Breedveld FC, Kloppenburg M Progression of hand osteoarthritis over 2 years: a clinical and radiological follow-up study. *Ann Rheum Dis* 68:1260-1264.

Dieguez-Gonzalez R, Calaza M, Shi D, Meulenbelt I, Loughlin J, Tsezou A, Dai J, Malizos KN, Slagboom EP, Kloppenburg M, Chapman K, Jiang Q, Kremer D, Gomez-Reino JJ, Nakajima N, Ikegawa S, Gonzalez A Testing the druggable endothelial differentiation gene 2 knee osteoarthritis genetic factor for replication in a wide range of sample collections. *Ann Rheum Dis* 68:1017-1021.

Evangelou E, Chapman K, Meulenbelt I, Karassa FB, Loughlin J, Carr A, Doherty M, Doherty S, Gomez-Reino JJ, Gonzalez A, Halldorsson BV, Hauksson VB, Hofman A, Hart DJ, Ikegawa S, Ingvarsson T, Jiang Q, Jonsdottir I, Jonsson H, Kerkhof HJ, Kloppenburg M, Lane NE, Li J, Lories RJ, van Meurs JB, Nakki A, Nevitt MC, Rodriguez-Lopez J, Shi D, Slagboom PE, Stefansson K, Tsezou A, Wallis GA, Watson CM, Spector TD, Uitterlinden AG, Valdes AM, Ioannidis JP Large-scale analysis of association between GDF5 and FRZB variants and osteoarthritis of the hip, knee, and hand. *Arthritis Rheum* 60:1710-1721.

Heijmans BT, Tobi EW, Lumey LH, Slagboom PE The epigenome: archive of the prenatal environment. *Epigenetics* 4:526-531.

Houwing-Duistermaat JJ, Callegaro A, Beekman M, Westendorp RG, Slagboom PE, van Houwelingen JC Weighted statistics for aggregation and linkage analysis of human longevity in selected families: the Leiden Longevity Study. *Stat Med* 28:140-151.

Kettunen J, Perola M, Martin NG, Cornes BK, Wilson SG, Montgomery GW, Benyamin B, Harris JR, Boomsma D, Willemsen G, Hottenga JJ, Slagboom PE, Christensen K, Kyvik KO, Sorensen TI, Pedersen NL, Magnusson PK, Andrew T, Spector TD, Widen E, Silventoinen K, Kaprio J, Palotie A, Peltonen L Multicenter dizygotic twin cohort study confirms two linkage susceptibility loci for body mass index at 3q29 and 7q36 and identifies three further potential novel loci. *Int J Obes (Lond)* 33:1235-1242.

Kuningas M, May L, Tamm R, van BD, van den Biggelaar AH, Meij JJ, Frolich M, Ziem JB, Suchiman HE, Metspalu A, Slagboom PE, Westendorp RG Selection for genetic variation inducing pro-inflammatory responses under adverse environmental conditions in a Ghanaian population. *PLoS One* 4:e7795.

Kuningas M, Mooijaart SP, Jolles J, Slagboom PE, Westendorp RG, van Heemst D. VDR gene variants associate with cognitive function and depressive symptoms in old age. *Neurobiol Aging* 30:466-473.

Lescai F, Blanche H, Nebel A, Beekman M, Sahbatou M, Flachsbarth F, Slagboom E, Schreiber S, Sorbi S, Passarino G, Franceschi C Human longevity and 11p15.5: a study in 1321 centenarians. *Eur J Hum Genet* 17:1515-1519.

Meulenbelt I, Chapman K, Dieguez-Gonzalez R, Shi D, Tsezou A, Dai J, Malizos KN, Kloppenburg M, Carr A, Nakajima M, van der Breggen R, Lakenberg N, Gomez-Reino JJ, Jiang Q, Ikegawa S, Gonzalez A, Loughlin J, Slagboom EP Large replication study and meta-analyses of DVWA as an osteoarthritis susceptibility locus in European and Asian populations. *Hum Mol Genet* 18:1518-1523.

Middeldorp CM, Sullivan PF, Wray NR, Hottenga JJ, de Geus EJ, van den BM, Montgomery GW, Coventry WL, Statham DJ, Andrews G, Slagboom PE, Boomsma DI, Martin NG Suggestive linkage on chromosome 2, 8, and 17 for lifetime major depression. *Am J Med Genet B Neuropsychiatr Genet* 150B:352-358.

Pons D, de Vries FR, van den Elsen PJ, Heijmans BT, Quax PH, Jukema JW Epigenetic histone acetylation modifiers in vascular remodelling: new targets for therapy in cardiovascular disease. *Eur Heart J* 30:266-277.

Reiling E, van Vliet-Ostapchouk JV, van 't Riet E, van Haeften TW, Arp PA, Hansen T, Kremer D, Groenewoud MJ, van Hove EC, Romijn JA, Smit JW, Nijpels G, Heine RJ, Uitterlinden AG, Pedersen O, Slagboom PE, Maassen JA, Hofker MH, 't Hart LM, Dekker JM Genetic association analysis of 13 nuclear-encoded mitochondrial candidate genes with type II diabetes mellitus: the DAMAGE study. *Eur J Hum Genet* 17:1056-1062.

Rodriguez-Lopez J, Pombo-Suarez M, Loughlin J, Tsezou A, Blanco FJ, Meulenbelt I, Slagboom PE, Valdes AM, Spector TD, Gomez-Reino JJ, Gonzalez A Association of a nsSNP in ADAMTS14 to some osteoarthritis phenotypes. *Osteoarthritis Cartilage* 17:321-327.

Rozing MP, Westendorp RG, Frolich M, de Craen AJ, Beekman M, Heijmans BT, Mooijaart SP, Blauw GJ, Slagboom PE, van Heemst D. Human insulin/IGF-1 and familial longevity at middle age. *Aging (Albany NY)* 1:714-722.

Sampietro ML, Pons D, de Knijff P, Slagboom PE, Zwinderman A, Jukema JW A genome wide association analysis in the GENDER study. *Neth Heart J* 17:262-264.

Slof-Op 't Landt MC, Dolan CV, Rebollo-Mesa I, Bartels M, van Furth EF, van Beijsterveldt CE, Meulenbelt I, Slagboom PE, Boomsma DI Sex differences in sum scores may be hard to interpret: the importance of measurement invariance. *Assessment* 16:415-423.

Steegers-Theunissen RP, Obermann-Borst SA, Kremer D, Lindemans J, Siebel C, Steegers EA, Slagboom PE, Heijmans BT Periconceptional maternal folic acid use of 400 microg per day is related to increased methylation of the IGF2 gene in the very young child. *PLoS One* 4:e7845.

Tobi EW, Lumey LH, Talens RP, Kremer D, Putter H, Stein AD, Slagboom PE, Heijmans BT DNA methylation differences after exposure to prenatal famine are common and timing- and sex-specific. *Hum Mol Genet* 18:4046-4053.

Vink JM, Smit AB, de Geus EJ, Sullivan P, Willemsen G, Hottenga JJ, Smit JH, Hoogendijk WJ, Zitman FG, Peltonen L, Kaprio J, Pedersen NL, Magnusson PK, Spector TD, Kyvik KO, Morley KI, Heath AC, Martin NG, Westendorp RG, Slagboom PE, Tiemeier H, Hofman A, Uitterlinden AG, Aulchenko YS, Amin N, van DC, Penninx BW, Boomsma DI Genome-wide association study of smoking initiation and current smoking. *Am J Hum Genet* 84:367-379.

Westendorp RG, van Heemst D, , Rozing MP, Frolich M, Mooijaart SP, Blauw GJ, Beekman M, Heijmans BT, de Craen AJ, Slagboom PE Nonagenarian siblings and their offspring display lower risk of mortality and morbidity than sporadic nonagenarians: The Leiden Longevity Study. *J Am Geriatr Soc* 57:1634-1637.

White WB, Schnitzer TJ, Fleming R, Duquesroix B, Beekman M Effects of the cyclooxygenase inhibiting nitric oxide donator naproxinod versus naproxen on systemic blood pressure in patients with osteoarthritis. *Am J Cardiol* 104:840-845.

Zhai G, van Meurs JB, Livshits G, Meulenbelt I, Valdes AM, Soranzo N, Hart D, Zhang F, Kato BS, Richards JB, Williams FM, Inouye M, Kloppenburg M, Deloukas P, Slagboom E, Uitterlinden A, Spector TD A genome-wide association study suggests that a locus within the ataxin 2 binding protein 1 gene is associated with hand osteoarthritis: the Treat-OA consortium. *J Med Genet* 46:614-616.

2008

Bos SD, Slagboom PE, Meulenbelt I New insights into osteoarthritis: early developmental features of an ageing-related disease. *Curr Opin Rheumatol* 20:553-559.

Bos SD, Suchiman HE, Kloppenburg M, Houwing-Duistermaat JJ, le Graverand MP, Seymour AB, Kroon HM, Slagboom PE, Meulenbelt I Allelic variation at the C-reactive protein gene associates to both hand osteoarthritis severity and serum high sensitive C-reactive protein levels in the GARP study. *Ann Rheum Dis* 67:877-879.

Botha-Scheepers S, Watt I, Slagboom E, de Craen AJ, Meulenbelt I, Rosendaal FR, Breedveld FC, Huizinga TW, Kloppenburg M Innate production of tumour necrosis factor alpha and interleukin 10 is associated with radiological progression of knee osteoarthritis. *Ann Rheum Dis* 67:1165-1169.

Chapman K, Takahashi A, Meulenbelt I, Watson C, Rodriguez-Lopez J, Egli R, Tsezou A, Malizos KN, Kloppenburg M, Shi D, Southam L, van der Breggen R, Donn R, Qin J, Doherty M, Slagboom PE, Wallis G, Kamatani N, Jiang Q, Gonzalez A, Loughlin J, Ikegawa S A meta-analysis of European and Asian cohorts reveals a global role of a functional SNP in the 5' UTR of GDF5 with osteoarthritis susceptibility. *Hum Mol Genet* 17:1497-1504.

Colas F, Meulenbelt I, Houwing-Duistermaat JJ, Kloppenburg M, Watt I, van Rooden SM, Visser M, Marinus J, van Hilten JJ, Slagboom P, Kok JN Reliability of cluster results for different types of time adjustments in complex disease research. *Conf Proc IEEE Eng Med Biol Soc* 2008:4601-4604.

Heijmans BT, Tobi EW, Stein AD, Putter H, Blauw GJ, Susser ES, Slagboom PE, Lumey LH Persistent epigenetic differences associated with prenatal exposure to famine in humans. *Proc Natl Acad Sci U S A* 105:17046-17049.

Hughes WO, Oldroyd BP, Beekman M, Ratnieks FL Ancestral monogamy shows kin selection is key to the evolution of eusociality. *Science* 320:1213-1216.

Jordan LA, Allsopp MH, Beekman M, Wessler TC, Oldroyd BP Inheritance of traits associated with reproductive potential in *Apis mellifera capensis* and *Apis mellifera scutellata* workers. *J Hered* 99:376-381.

Kuningas M, Mooijaart SP, van Heemst D, Zwaan BJ, Slagboom PE, Westendorp RG Genes encoding longevity: from model organisms to humans. *Aging Cell* 7:270-280.

Macgregor S, Hottenga JJ, Lind PA, Suchiman HE, Willemsen G, Slagboom PE, Montgomery GW, Martin NG, Visscher PM, Boomsma DI Vitamin D receptor gene polymorphisms have negligible effect on human height. *Twin Res Hum Genet* 11:488-494.

Meulenbelt I, Min JL, Bos S, Riyazi N, Houwing-Duistermaat JJ, van der Wijk HJ, Kroon HM, Nakajima M, Ikegawa S, Uitterlinden AG, van Meurs JB, van der Deure WM, Visser TJ, Seymour AB, Lakenberg N, van der Breggen R, Kremer D, van Duijn CM, Kloppenburg M, Loughlin J, Slagboom PE Identification of DIO2 as a new susceptibility locus for symptomatic osteoarthritis. *Hum Mol Genet* 17:1867-1875.

Middeldorp CM, Hottenga JJ, Slagboom PE, Sullivan PF, de Geus EJ, Posthuma D, Willemsen G, Boomsma DI Linkage on chromosome 14 in a genome-wide linkage study of a broad anxiety phenotype. *Mol Psychiatry* 13:84-89.

Passtoors WM, Beekman M, Gunn D, Boer JM, Heijmans BT, Westendorp RG, Zwaan BJ, Slagboom PE Genomic studies in ageing research: the need to integrate genetic and gene expression approaches. *J Intern Med* 263:153-166.

Riyazi N, Rosendaal FR, Slagboom E, Kroon HM, Breedveld FC, Kloppenburg M Risk factors in familial osteoarthritis: the GARP sibling study. *Osteoarthritis Cartilage* 16:654-659.

Shifman S, Bhomra A, Smiley S, Wray NR, James MR, Martin NG, Hetta JM, An SS, Neale MC, van den Oord EJ, Kendler KS, Chen X, Boomsma DI, Middeldorp CM, Hottenga JJ, Slagboom PE, Flint J A whole genome association study of neuroticism using DNA pooling. *Mol Psychiatry* 13:302-312.

Slagboom E, Meulenbelt I Genetics of osteoarthritis: early developmental clues to an old disease. *Nat Clin Pract Rheumatol* 4:563.

Slof-Op 't Landt MC, Bartels M, van Furth EF, van Beijsterveldt CE, Meulenbelt I, Slagboom PE, Boomsma DI Genetic influences on disordered eating behaviour are largely independent of body mass index. *Acta Psychiatr Scand* 117:348-356.

Trompet S, de Craen AJ, Slagboom P, Shepherd J, Blauw GJ, Murphy MB, Bollen EL, Buckley BM, Ford I, Gaw A, Macfarlane PW, Packard CJ, Stott DJ, Jukema JW, Westendorp RG Genetic variation in the interleukin-1 beta-converting enzyme associates with cognitive function. The PROSPER study. *Brain* 131:1069-1077.

Trompet S, de Craen AJ, Slagboom P, Shepherd J, Blauw GJ, Murphy MB, Bollen EL, Buckley BM, Ford I, Gaw A, Macfarlane PW, Packard CJ, Stott DJ, Westendorp RG, Jukema JW Lymphotoxin-alpha C804A polymorphism is a risk factor for stroke. The PROSPER study. *Exp Gerontol* 43:801-805.

Willems JM, Trompet S, Slagboom PE, de Craen AJ, Westendorp RG. Hematopoietic capacity and exceptional survival: the Leiden Longevity Study. *J Am Geriatr Soc* 56:2009-2013.

Wray NR, Middeldorp CM, Birley AJ, Gordon SD, Sullivan PF, Visscher PM, Nyholt DR, Willemsen G, de Geus EJ, Slagboom PE, Montgomery GW, Martin NG, Boomsma DI Genome-wide linkage analysis of multiple measures of neuroticism of 2 large cohorts from Australia and the Netherlands. *Arch Gen Psychiatry* 65:649-658.

2007

Ali S, Vollaard AM, Kremer D, de Visser AW, Martina CA, Widjaja S, Surjadi C, Slagboom E, van d, V, van Dissel JT Polymorphisms in proinflammatory genes and susceptibility to typhoid fever and paratyphoid fever. *J Interferon Cytokine Res* 27:271-279.

Alizadeh BZ, Njajou OT, Hazes JM, Hofman A, Slagboom PE, Pols HA, van Duijn CM The H63D variant in the HFE gene predisposes to arthralgia, chondrocalcinosis and osteoarthritis. *Ann Rheum Dis* 66:1436-1442.

Bakaysa SL, Mucci LA, Slagboom PE, Boomsma DI, McClearn GE, Johansson B, Pedersen NL Telomere length predicts survival independent of genetic influences. *Aging Cell* 6:769-774.

Botha-Scheepers SA, Watt I, Slagboom E, Meulenbelt I, Rosendaal FR, Breedveld FC, Kloppenburg M Influence of familial factors on radiologic disease progression over two years in siblings with osteoarthritis at multiple sites: a prospective longitudinal cohort study. *Arthritis Rheum* 57:626-632.

Finken MJ, Meulenbelt I, Dekker FW, Frolich M, Romijn JA, Slagboom PE, Wit JM The 23K variant of the R23K polymorphism in the glucocorticoid receptor gene protects against postnatal growth failure and insulin resistance after preterm birth. *J Clin Endocrinol Metab* 92:4777-4782.

Franceschi C, Bezrukov V, Blanche H, Bolund L, Christensen K, de Benedictis G, Deiana L, Gonos E, Hervonen A, Yang H, Jeune B, Kirkwood TB, Kristensen P, Leon A, Pelicci PG, Peltonen L, Poulain M, Rea IM, Remacle J, Robine JM, Schreiber S, Sikora E, Slagboom PE, Spazzafumo L, Stazi MA, Toussaint O, Vaupel JW Genetics of healthy aging in Europe: the EU-integrated project GEHA (GEnetics of Healthy Aging). *Ann N Y Acad Sci* 1100:21-45.

Heijmans BT, Kremer D, Tobi EW, Boomsma DI, Slagboom PE Heritable rather than age-related environmental and stochastic factors dominate variation in DNA methylation of the human IGF2/H19 locus. *Hum Mol Genet* 16:547-554.

Kuningas M, Putter M, Westendorp RG, Slagboom PE, van Heemst D. SIRT1 gene, age-related diseases, and mortality: the Leiden 85-plus study. *J Gerontol A Biol Sci Med Sci* 62:960-965.

Kuningas M, de Rijk RH, Westendorp RG, Jolles J, Slagboom PE, van Heemst D. Mental performance in old age dependent on cortisol and genetic variance in the mineralocorticoid and glucocorticoid receptors. *Neuropsychopharmacology* 32:1295-1301.

Kuningas M, Magi R, Westendorp RG, Slagboom PE, Remm M, van Heemst D. Haplotypes in the human Foxo1a and Foxo3a genes; impact on disease and mortality at old age. *Eur J Hum Genet* 15:294-301.

Lambert JC, Ferreira S, Gussekloo J, Christiansen L, Brysbaert G, Slagboom E, Cotel D, Petit T, Hauw JJ, DeKosky ST, Richard F, Berr C, Lendon C, Kamboh MI, Mann D, Christensen K, Westendorp R, Amouyel P Evidence for the association of the S100beta gene with low cognitive performance and dementia in the elderly. *Mol Psychiatry* 12:870-880.

Loughlin J, Meulenbelt I, Min J, Mustafa Z, Sinsheimer JS, Carr A, Slagboom PE Genetic association analysis of RHOB and TXNDC3 in osteoarthritis. *Am J Hum Genet* 80:383-386.

Mayboroda OA, Neuss C, Pelzing M, Zurek G, Derks R, Meulenbelt I, Kloppenburg M, Slagboom EP, Deelder AM Amino acid profiling in urine by capillary zone electrophoresis - mass spectrometry. *J Chromatogr A* 1159:149-153.

Meulenbelt I, Kloppenburg M, Kroon HM, Houwing-Duistermaat JJ, Garnero P, Hellio-Le Graverand MP, DeGroot J, Slagboom PE Clusters of biochemical markers are associated with radiographic subtypes of osteoarthritis (OA) in subject with familial OA at multiple sites. The GARP study. *Osteoarthritis Cartilage* 15:379-385.

Middeldorp CM, de Geus EJ, Beem AL, Lakenberg N, Hottenga JJ, Slagboom PE, Boomsma DI Family based association analyses between the serotonin transporter gene polymorphism (5-HTTLPR) and neuroticism, anxiety and depression. *Behav Genet* 37:294-301.

Min JL, Meulenbelt I, Kloppenburg M, van Duijn CM, Slagboom PE Mutation analysis of candidate genes within the 2q33.3 linkage area for familial early-onset generalised osteoarthritis. *Eur J Hum Genet* 15:791-799.

Mooijaart SP, Kuningas M, Westendorp RG, Houwing-Duistermaat JJ, Slagboom PE, Rensen PC, van Heemst D. Liver X receptor alpha associates with human life span. *J Gerontol A Biol Sci Med Sci* 62:343-349.

Putter H, Meulenbelt I, van Houwelingen JC Relative efficiency of haplotype frequency estimation in sibships and nuclear families compared to unrelated individuals. *Hum Hered* 64:52-62.

Sahiratmadja E, Wieringa FT, van CR, de Visser AW, Adnan I, Alisjahbana B, Slagboom E, Marzuki S, Ottenhoff TH, van d, V, Marx JJ Iron deficiency and NRAMP1 polymorphisms (INT4, D543N and 3'UTR) do not contribute to severity of anaemia in tuberculosis in the Indonesian population. *Br J Nutr* 98:684-690.

Slagboom PE, Heijmans BT, Beekman M, Meulenbelt I Molecular epidemiology, candidate genes versus genome-wide scans. *Genes Nutr* 2:27-29.

Thabet MM, Wesoly J, Slagboom PE, Toes RE, Huizinga TW FCRL3 promoter 169 CC homozygosity is associated with susceptibility to rheumatoid arthritis in Dutch Caucasians. *Ann Rheum Dis* 66:803-806.

Trompet S, Pons D, de Craen AJ, Slagboom P, Shepherd J, Blauw GJ, Murphy MB, Cobbe SM, Bollen EL, Buckley BM, Ford I, Hyland M, Gaw A, Macfarlane PW, Packard CJ, Norrie J, Perry IJ, Stott DJ, Sweeney BJ, Twomey C, Westendorp RG, Jukema JW Genetic variation in the interleukin-10 gene promoter and risk of coronary and cerebrovascular events: the PROSPER study. *Ann N Y Acad Sci* 1100:189-198.

Whitfield JB, Dy V, McQuilty R, Zhu G, Montgomery GW, Ferreira MA, Duffy DL, Neale MC, Heijmans BT, Heath AC, Martin NG Evidence of genetic effects on blood lead concentration. *Environ Health Perspect* 115:1224-1230.

2006

Beekman M, Blauw GJ, Houwing-Duistermaat JJ, Brandt BW, Westendorp RG, Slagboom PE Chromosome 4q25, microsomal transfer protein gene, and human longevity: novel data and a meta-analysis of association studies. *J Gerontol A Biol Sci Med Sci* 61:355-362.

Beem AL, Geus EJ, Hottenga JJ, Sullivan PF, Willemsen G, Slagboom PE, Boomsma DI Combined linkage and association analyses of the 124-bp allele of marker D2S2944 with anxiety, depression, neuroticism and major depression. *Behav Genet* 36:127-136.

Boomsma DI, Cacioppo JT, Slagboom PE, Posthuma D Genetic linkage and association analysis for loneliness in Dutch twin and sibling pairs points to a region on chromosome 12q23-24. *Behav Genet* 36:137-146.

Botha-Scheepers S, Riyazi N, Kroon HM, Scharloo M, Houwing-Duistermaat JJ, Slagboom E, Rosendaal FR, Breedveld FC, Kloppenburg M Activity limitations in the lower extremities in patients with osteoarthritis: the modifying effects of illness perceptions and mental health. *Osteoarthritis Cartilage* 14:1104-1110.

Heijmans BT, Beekman M, Houwing-Duistermaat JJ, Cobain MR, Powell J, Blauw GJ, van der OF, Westendorp RG, Slagboom PE Lipoprotein particle profiles mark familial and sporadic human longevity. *PLoS Med* 3:e495.

Kuningas M, Mooijaart SP, Slagboom PE, Westendorp RG, van Heemst D. Genetic variants in the glucocorticoid receptor gene (NR3C1) and cardiovascular disease risk. The Leiden 85-plus Study. *Biogerontology* 7:231-238.

Kuningas M, Slagboom PE, Westendorp RG, van Heemst D. Impact of genetic variations in the WRN gene on age related pathologies and mortality. *Mech Ageing Dev* 127:307-313.

Meulenbelt I, Kloppenburg M, Kroon HM, Houwing-Duistermaat JJ, Garnero P, Hellio Le Graverand MP, DeGroot J, Slagboom PE Urinary CTX-II levels are associated with radiographic subtypes of osteoarthritis in hip, knee, hand, and facet joints in subject with familial osteoarthritis at multiple sites: the GARP study. *Ann Rheum Dis* 65:360-365.

Meulenbelt I, Min JL, van Duijn CM, Kloppenburg M, Breedveld FC, Slagboom PE Strong linkage on 2q33.3 to familial early-onset generalized osteoarthritis and a consideration of two positional candidate genes. *Eur J Hum Genet* 14:1280-1287.

Min J, Meulenbelt I, Slagboom E Replication in genetic association studies: Comment on the editorial by Spector et al. *Arthritis Rheum* 54:3063-3064.

Min JL, Meulenbelt I, Riyazi N, Kloppenburg M, Houwing-Duistermaat JJ, Seymour AB, van Duijn CM, Slagboom PE Association of matrilin-3 polymorphisms with spinal disc degeneration and osteoarthritis of the first carpometacarpal joint of the hand. *Ann Rheum Dis* 65:1060-1066.

Min JL, Lakenberg N, Bakker-Verweij M, Suchiman HE, Boomsma DI, Slagboom PE, Meulenbelt I High microsatellite and SNP genotyping success rates established in a large number of genomic DNA samples extracted from mouth swabs and genotypes. *Twin Res Hum Genet* 9:501-506.

Mooijaart SP, Berbee JF, van Heemst D, Havekes LM, de Craen AJ, Slagboom PE, Rensen PC, Westendorp RG ApoE plasma levels and risk of cardiovascular mortality in old age. *PLoS Med* 3:e176.

Posthuma D, Visscher PM, Willemsen G, Zhu G, Martin NG, Slagboom PE, de Geus EJ, Boomsma DI Replicated linkage for eye color on 15q using comparative ratings of sibling pairs. *Behav Genet* 36:12-17.

Schoenmaker M, de Craen AJ, de Meijer PH, Beekman M, Blauw GJ, Slagboom PE, Westendorp RG Evidence of genetic enrichment for exceptional survival using a family approach: the Leiden Longevity Study. *Eur J Hum Genet* 14:79-84.

Valle A, O'Connor DT, Taylor P, Zhu G, Montgomery GW, Slagboom PE, Martin NG, Whitfield JB Butyrylcholinesterase: association with the metabolic syndrome and identification of 2 gene loci affecting activity. *Clin Chem* 52:1014-1020.

van Dunné FM, de Craen AJ, Heijmans BT, Helmerhorst FM, Westendorp RG Gender-specific association of the factor V Leiden mutation with fertility and fecundity in a historic cohort. The Leiden 85-Plus Study. *Hum Reprod* 21:967-971.

Vink JM, Posthuma D, Neale MC, Slagboom PE, Boomsma DI. Genome-wide linkage scan to identify Loci for age at first cigarette in Dutch sibling pairs. *Behav Genet* 36:100-111.

Wessels JA, de Vries-Bouwstra JK, Heijmans BT, Slagboom PE, Goekoop-Ruiterman YP, Allaart CF, Kerstens PJ, van Zeven D, Breedveld FC, Dijkmans BA, Huizinga TW, Guchelaar HJ Efficacy and toxicity of methotrexate in early

rheumatoid arthritis are associated with single-nucleotide polymorphisms in genes coding for folate pathway enzymes. *Arthritis Rheum* 54:1087-1095.

2005

Alizadeh BZ, Njajou OT, Bijkerk C, Meulenbelt I, Wildt SC, Hofman A, Pols HA, Slagboom PE, Duijn CM Evidence for a role of the genomic region of the gene encoding for the alpha1 chain of type IX collagen (COL9A1) in hip osteoarthritis: A population-based study. *Arthritis Rheum* 52:1437-1442.

Brandt BW, Zwaan BJ, Beekman M, Westendorp RG, Slagboom PE Shuttling between species for pathways of lifespan regulation: a central role for the vitellogenin gene family? *Bioessays* 27:339-346.

Cornes BK, Medland SE, Ferreira MA, Morley KI, Duffy DL, Heijmans BT, Montgomery GW, Martin NG Sex-limited genome-wide linkage scan for body mass index in an unselected sample of 933 Australian twin families. *Twin Res Hum Genet* 8:616-632.

de Geus EJ, Posthuma D, Kupper N, van den Berg M, Willemsen G, Beem AL, Slagboom PE, Boomsma DI A whole-genome scan for 24-hour respiration rate: a major locus at 10q26 influences respiration during sleep. *Am J Hum Genet* 76:100-111.

Heijmans BT, Beekman M, Putter H, Lakenberg N, van der Wijk HJ, Whitfield JB, Posthuma D, Pedersen NL, Martin NG, Boomsma DI, Slagboom PE Meta-analysis of four new genome scans for lipid parameters and analysis of positional candidates in positive linkage regions. *Eur J Hum Genet* 13:1143-1153.

Leroi AM, Bartke A, de Benedictis G, Franceschi C, Gartner A, Gonos ES, Fedei ME, Kivisild T, Lee S, Kartaf-Ozer N, Schumacher M, Sikora E, Slagboom E, Tatar M, Yashin AI, Vijg J, Zwaan B What evidence is there for the existence of individual genes with antagonistic pleiotropic effects? *Mech Ageing Dev* 126:421-429.

Min JL, Meulenbelt I, Riyazi N, Kloppenburg M, Houwing-Duistermaat JJ, Seymour AB, Pols HA, van Duijn CM, Slagboom PE Association of the Frizzled-related protein gene with symptomatic osteoarthritis at multiple sites. *Arthritis Rheum* 52:1077-1080.

Mooijaart SP, Brandt BW, Baldal EA, Pijpe J, Kuningas M, Beekman M, Zwaan BJ, Slagboom PE, Westendorp RG, van Heemst D. C. elegans DAF-12, Nuclear Hormone Receptors and human longevity and disease at old age. *Ageing Res Rev* 4:351-371.

Posthuma D, Meulenbelt I, de Craen AJ, de Geus EJ, Slagboom PE, Boomsma DI, Westendorp RG Human cytokine response to ex vivo amyloid-beta stimulation is mediated by genetic factors. *Twin Res Hum Genet* 8:132-137.

Posthuma D, Luciano M, Geus EJ, Wright MJ, Slagboom PE, Montgomery GW, Boomsma DI, Martin NG A genomewide scan for intelligence identifies quantitative trait loci on 2q and 6p. *Am J Hum Genet* 77:318-326.

Riyazi N, Meulenbelt I, Kroon HM, Ronday KH, Helliö Le Graverand MP, Rosendaal FR, Breedveld FC, Slagboom PE, Kloppenburg M Evidence for familial aggregation of hand, hip, and spine but not knee osteoarthritis in siblings with multiple joint involvement: the GARP study. *Ann Rheum Dis* 64:438-443.

Riyazi N, Slagboom E, de Craen AJ, Meulenbelt I, Houwing-Duistermaat JJ, Kroon HM, van SD, Rosendaal FR, Breedveld FC, Huizinga TW, Kloppenburg M Association of the risk of osteoarthritis with high innate production of interleukin-1beta and low innate production of interleukin-10 ex vivo, upon lipopolysaccharide stimulation. *Arthritis Rheum* 52:1443-1450.

Slof-Op 't Landt MC, van Furth EF, Meulenbelt I, Slagboom PE, Bartels M, Boomsma DI, Bulik CM Eating disorders: from twin studies to candidate genes and beyond. *Twin Res Hum Genet* 8:467-482.

van Heemst D, Beekman M, Mooijaart SP, Heijmans BT, Brandt BW, Zwaan BJ, Slagboom PE, Westendorp RG Reduced insulin/IGF-1 signalling and human longevity. *Aging Cell* 4:79-85.

van Heemst D, Mooijaart SP, Beekman M, Schreuder J, de Craen AJ, Brandt BW, Slagboom PE, Westendorp RG Variation in the human TP53 gene affects old age survival and cancer mortality. *Exp Gerontol* 40:11-15.

Wesoly J, Toes RE, Slagboom PE, Huizinga TW RUNX1 intronic SNP is not associated with rheumatoid arthritis susceptibility in Dutch Caucasians. *Rheumatology (Oxford)* 44:1196.

Basrak B, Klaassen CA, Beekman M, Martin NG, Boomsma DI Copulas in QTL mapping. *Behav Genet* 34:161-171.

2004

Beekman M, Posthuma D, Heijmans BT, Lakenberg N, Suchiman HE, Snieder H, de Knijff P, Frants RR, van Ommen GJ, Kluff C, Vogler GP, Slagboom PE, Boomsma DI Combined association and linkage analysis applied to the APOE locus. *Genet Epidemiol* 26:328-337.

Heijmans BT, Beem AL, Willemsen G, Posthuma D, Slagboom PE, Boomsma D Further evidence for a QTL influencing body mass index on chromosome 7p from a genome-wide scan in Dutch families. *Twin Res* 7:192-196.

Kurreeman FA, Schonkeren JJ, Heijmans BT, Toes RE, Huizinga TW Transcription of the IL10 gene reveals allele-specific regulation at the mRNA level. *Hum Mol Genet* 13:1755-1762.

Meulenbelt I, Seymour AB, Nieuwland M, Huizinga TW, van Duijn CM, Slagboom PE Association of the interleukin-1 gene cluster with radiographic signs of osteoarthritis of the hip. *Arthritis Rheum* 50:1179-1186.

Mooijaart SP, van Heemst D, Schreuder J, van GS, Beekman M, Brandt BW, Slagboom PE, Westendorp RG. Variation in the SHC1 gene and longevity in humans. *Exp Gerontol* 39:263-268.

van den Biggelaar AH, de Craen AJ, Gussekloo J, Huizinga TW, Heijmans BT, Frolich M, Kirkwood TB, Westendorp RG Inflammation underlying cardiovascular mortality is a late consequence of evolutionary programming. *FASEB J* 18:1022-1024.

van den Biggelaar AH, Huizinga TW, de Craen AJ, Gussekloo J, Heijmans BT, Frolich M, Westendorp RG Impaired innate immunity predicts frailty in old age. The Leiden 85-plus study. *Exp Gerontol* 39:1407-1414.

Vink JM, Beem AL, Posthuma D, Neale MC, Willemsen G, Kendler KS, Slagboom PE, Boomsma DI Linkage analysis of smoking initiation and quantity in Dutch sibling pairs. *Pharmacogenomics J* 4:274-282.

Willemsen G, Boomsma DI, Beem AL, Vink JM, Slagboom PE, Posthuma D QTLs for height: results of a full genome scan in Dutch sibling pairs. *Eur J Hum Genet* 12:820-828.

Zhai G, Rivadeneira F, Houwing-Duistermaat JJ, Meulenbelt I, Bijkerk C, Hofman A, van Meurs JB, Uitterlinden AG, Pols HA, Slagboom PE, van Duijn CM Insulin-like growth factor I gene promoter polymorphism, collagen type II alpha1 (COL2A1) gene, and the prevalence of radiographic osteoarthritis: the Rotterdam Study. *Ann Rheum Dis* 63:544-548.

Beekman M, Heijmans BT, Martin NG, Whitfield JB, Pedersen NL, DeFaire U, Snieder H, Lakenberg N, Suchiman HE, de Knijff P, Frants RR, van Ommen GJ, Kluff C, Vogler GP, Boomsma DI, Slagboom PE Evidence for a QTL on chromosome 19 influencing LDL cholesterol levels in the general population. *Eur J Hum Genet* 11:845-850.

2003

Beekman M, Heijmans BT, Martin NG, Whitfield JB, Pedersen NL, DeFaire U, Snieder H, Lakenberg N, de Knijff P, Frants RR, van Ommen GJ, Kluff C, Vogler GP, Slagboom PE, Boomsma DI Two-locus linkage analysis applied to putative quantitative trait loci for lipoprotein(a) levels. *Twin Res* 6:322-324.

Heijmans BT, Boer JM, Suchiman HE, Cornelisse CJ, Westendorp RG, Kromhout D, Feskens EJ, Slagboom PE A common variant of the methylenetetrahydrofolate reductase gene (1p36) is associated with an increased risk of cancer. *Cancer Res* 63:1249-1253.

Houwing-Duistermaat JJ, Bijkerk C, Hsu L, Stijnen T, Slagboom EP, van Duijn CM A unified approach to modelling linkage to quantitative and qualitative traits. *Ann Hum Genet* 67:457-463.

2002

Beekman M, Heijmans BT, Martin NG, Pedersen NL, Whitfield JB, DeFaire U, van Baal GC, Snieder H, Vogler GP, Slagboom PE, Boomsma DI Heritabilities of apolipoprotein and lipid levels in three countries. *Twin Res* 5:87-97.

Hayes RB, Beekman ML Alpha CAM alarm set points in a salt dust environment. *Health Phys* 82:887-897.

Heijmans BT, Westendorp RG, Droog S, Kluff C, Knook DL, Slagboom PE Association of the tumour necrosis factor alpha -308G/A polymorphism with the risk of diabetes in an elderly population-based cohort. *Genes Immun* 3:225-228.

Heijmans BT, Slagboom PE, Gussekloo J, Droog S, Lagaay AM, Klufft C, Knook DL, Westendorp RG Association of APOE epsilon2/epsilon3/epsilon4 and promoter gene variants with dementia but not cardiovascular mortality in old age. *Am J Med Genet* 107:201-208.

Slagboom PE, Meulenbelt I Organisation of the human genome and our tools for identifying disease genes. *Biol Psychol* 61:11-31.

Van Aken MO, de Craen AJ, Gussekloo J, Moghaddam PH, Vandenbroucke JP, Heijmans BT, Slagboom PE, Westendorp RG No increase in mortality and morbidity among carriers of the C282Y mutation of the hereditary haemochromatosis gene in the oldest old: the Leiden 85-plus study. *Eur J Clin Invest* 32:750-754.

2001

Beekman M, Lakenberg N, Cherny SS, de Knijff P, Klufft CC, van Ommen GJ, Vogler GP, Frants RR, Boomsma DI, Slagboom PE A powerful and rapid approach to human genome scanning using small quantities of genomic DNA. *Genet Res* 77:129-134.

Duffy D, Montgomery G, Treloar S, Birley A, Kirk K, Boomsma D, Beem L, de GE, Slagboom E, Knighton J, Reed P, Martin N IBD sharing around the PPARG locus is not increased in dizygotic twins or their mothers. *Nat Genet* 28:315.

2000

Wijsman GW, Iglesias GA, de Wolf WH, Beekman MC, Bickelhaupt F, Kooijman H, Spek AL X-ray crystal structures and conformational analysis of bicyclo[5.3.1]undec-1(11)-enes: twisting versus pyradialization in anti-bredt olefins. *J Org Chem* 66:1216-1227.

Boomsma DI, Beem AL, van den BM, Dolan CV, Koopmans JR, Vink JM, de Geus EJ, Slagboom PE Netherlands twin family study of anxious depression (NETSAD). *Twin Res* 3:323-334.

Gasior M, Ungard JT, Beekman M, Carter RB, Witkin JM Acute and chronic effects of the synthetic neuroactive steroid, ganaxolone, against the convulsive and lethal effects of pentylenetetrazol in seizure-kindled mice: comparison with diazepam and valproate. *Neuropharmacology* 39:1184-1196.

Heijmans BT, Westendorp RG, Lagaay AM, Knook DL, Klufft C, Slagboom PE Common paraoxonase gene variants, mortality risk and fatal cardiovascular events in elderly subjects. *Atherosclerosis* 149:91-97.

Heijmans BT, Westendorp RG, Slagboom PE Common gene variants, mortality and extreme longevity in humans. *Exp Gerontol* 35:865-877.

Rietveld MJ, van der Valk JC, Bongers IL, Stroet TM, Slagboom PE, Boomsma DI Zygosity diagnosis in young twins by parental report. *Twin Res* 3:134-141.

Slagboom PE, Heijmans BT, Beekman M, Westendorp RG, Meulenbelt I Genetics of human aging. The search for genes contributing to human longevity and diseases of the old. *Ann N Y Acad Sci* 908:50-63.

Ungard JT, Beekman M, Gasior M, Carter RB, Dijkstra D, Witkin JM Modification of behavioral effects of drugs in mice by neuroactive steroids. *Psychopharmacology (Berl)* 148:336-343.

van Ittersum FJ, de Man AM, Thijssen S, de Knijff P, Slagboom E, Smulders Y, Tarnow L, Donker AJ, Bilo HJ, Stehouwer CD Genetic polymorphisms of the renin-angiotensin system and complications of insulin-dependent diabetes mellitus. *Nephrol Dial Transplant* 15:1000-1007.

van Meurs JB, Arp PP, Fang Y, Slagboom PE, Meulenbelt I, van Leeuwen JP, Pols HA, Uitterlinden AG Detection of sequence variability of the collagen type IIalpha 1 3' variable number of tandem repeat. *Electrophoresis* 21:3571-3577.

1999

Bijkerk C, Houwing-Duistermaat JJ, Valkenburg HA, Meulenbelt I, Hofman A, Breedveld FC, Pols HA, van Duijn CM, Slagboom PE Heritabilities of radiologic osteoarthritis in peripheral joints and of disc degeneration of the spine. *Arthritis Rheum* 42:1729-1735.

de Maat MP, Jukema JW, Ye S, Zwinderman AH, Moghaddam PH, Beekman M, Kastelein JJ, van Boven AJ, Bruschke AV, Humphries SE, Klufft C, Henney AM Effect of the stromelysin-1 promoter on efficacy of pravastatin in coronary atherosclerosis and restenosis. *Am J Cardiol* 83:852-856.

Gusseklou J, Heijmans BT, Slagboom PE, Lagaay AM, Knook DL, Westendorp RG Thermolabile methylenetetrahydrofolate reductase gene and the risk of cognitive impairment in those over 85. *J Neurol Neurosurg Psychiatry* 67:535-538.

Heijmans BT, Westendorp RG, Knook DL, Klufft C, Slagboom PE Angiotensin I-converting enzyme and plasminogen activator inhibitor-1 gene variants: risk of mortality and fatal cardiovascular disease in an elderly population-based cohort. *J Am Coll Cardiol* 34:1176-1183.

Heijmans BT, Gussekloo J, Klufft C, Droog S, Lagaay AM, Knook DL, Westendorp RG, Slagboom EP Mortality risk in men is associated with a common mutation in the methylene-tetrahydrofolate reductase gene (MTHFR). *Eur J Hum Genet* 7:197-204.

Meulenbelt I, Bijkerk C, De Wildt SC, Miedema HS, Breedveld FC, Pols HA, Hofman A, van Duijn CM, Slagboom PE Haplotype analysis of three polymorphisms of the COL2A1 gene and associations with generalised radiological osteoarthritis. *Ann Hum Genet* 63:393-400.

van Schothorst EM, Prins DE, Baysal BE, Beekman M, Licht JD, Waxman S, Zelent A, Cornelisse CJ, van Ommen GJ, Richard CW, III, Devilee P Genomic structure of the human PLZF gene. *Gene* 236:21-24.

Westendorp RG, Hottenga JJ, Slagboom PE Variation in plasminogen-activator-inhibitor-1 gene and risk of meningococcal septic shock. *Lancet* 354:561-563.

1998

Bots ML, van KF, Breteler MM, Slagboom PE, Hofman A, Haverkate F, Meijer P, Koudstaal PJ, Grobbee DE, Klufft C Response to activated protein C in subjects with and without dementia. The Dutch Vascular Factors in Dementia Study. *Haemostasis* 28:209-215.

Heijmans BT, Westendorp RG, Knook DL, Klufft C, Slagboom PE The risk of mortality and the factor V Leiden mutation in a population-based cohort. *Thromb Haemost* 80:607-609.

Meulenbelt I, Bijkerk C, Miedema HS, Breedveld FC, Hofman A, Valkenburg HA, Pols HA, Slagboom PE, van Duijn CM A genetic association study of the IGF-1 gene and radiological osteoarthritis in a population-based cohort study (the Rotterdam Study). *Ann Rheum Dis* 57:371-374.

van Schothorst EM, Beekman M, Torremans P, Kuipers-Dijkshoorn NJ, Wessels HW, Bardeol AF, van der Mey AG, van D, V, van Ommen GJ, Devilee P, Cornelisse CJ Paragangliomas of the head and neck region show complete loss of heterozygosity at 11q22-q23 in chief cells and the flow-sorted DNA aneuploid fraction. *Hum Pathol* 29:1045-1049.

1997

Meulenbelt I, Bijkerk C, De Wildt SC, Miedema HS, Valkenburg HA, Breedveld FC, Pols HA, Te Koppele JM, Sloos VF, Hofman A, Slagboom PE, van Duijn CM Investigation of the association of the CRTM and CRTL1 genes with radiographically evident osteoarthritis in subjects from the Rotterdam study. *Arthritis Rheum* 40:1760-1765.

Meulenbelt I, Bijkerk C, Breedveld FC, Slagboom PE Genetic linkage analysis of 14 candidate gene loci in a family with autosomal dominant osteoarthritis without dysplasia. *J Med Genet* 34:1024-1027.

Stott WT, Beekman MJ, Johnson KA, Spencer PJ Evaluation of a novel assay of potential toxicity/neurotoxicity of carpet emissions (VOCs) in mice. *Food Chem Toxicol* 35:241-254.

Verheggen PW, Heymans BT, Slagboom PE, Haverkate F, Cats VM Normal prevalence of factor V Leiden gene mutation in patients with severe unstable angina. *Thromb Haemost* 77:1218.

Vogler GP, McClearn GE, Snieder H, Boomsma DI, Palmer R, de Knijff P, Slagboom PE Genetics and behavioral medicine: risk factors for cardiovascular disease. *Behav Med* 22:141-149.

1996

Meulenbelt I, Williams CJ, Te Koppele JM, Van de Giessen GC, Slagboom PE Population haplotype analysis and evolutionary relations of the COL2A1 gene. *Ann Hum Genet* 60:189-199.

van der Bom JG, Bots ML, Haverkate F, Slagboom PE, Meijer P, de Jong PT, Hofman A, Grobbee DE, Kluit C Reduced response to activated protein C is associated with increased risk for cerebrovascular disease. *Ann Intern Med* 125:265-269.

1995

Meulenbelt I, Droog S, Trommelen GJ, Boomsma DI, Slagboom PE High-yield noninvasive human genomic DNA isolation method for genetic studies in geographically dispersed families and populations. *Am J Hum Genet* 57:1252-1254.

1994

Slagboom PE, Droog S, Boomsma DI Genetic determination of telomere size in humans: a twin study of three age groups. *Am J Hum Genet* 55:876-882.