

PhD Project Description

School/Department:	Department of Internal Medicine, Erasmus MC
Supervisor information:	<ul style="list-style-type: none"> • Prof. dr. Fernando Rivadeneira (f.rivadeneira@erasmusmc.nl), Professor • Dr. Ling Oei (h.l.d.w.oei@erasmusmc.nl), Assistant Professor • Dr. M. Carolina Medina Gomez (m.medinagomez@erasmusmc.nl), Post-doctoral Scholar • Website: http://glimdna.org • Grants: <ul style="list-style-type: none"> - Coordinating center European Commission-FP7: HEALTH-2007: €3,000K - Co-Principal investigator/subcontractor US Government-NIH/R01 2010: \$150K of \$2,500K - Netherlands Consortium of Healthy Aging (NCHA): 2009-2012: €200K - Project manager NWO GROOT Investeren 2006: €6,000K - NWO VIDI €800K - EU European cooperation in science and technology €150K - Marie Skłodowska-Curie Innovative Training Network €520K of €3,800K - Erasmus MC fellowship €400K • Most important publications: <ul style="list-style-type: none"> - 2008: Lancet, 371(9623): p. 1505-12. IF:38.3 - 2009: Nat Genet 41, 1199-206. IF:36.4 - 2010: Nature 467, 832-8 IF:36.3 - 2012: PLoS Genet, Jul;8(7):e1002718. Epub 2012 Jul 5 IF:9.5 - 2012: Nature Genetics;44(5):491-501. IF:35.2 - 2012: Diabetes Care;36(6):1619-28. IF:8.57 - 2016: J Bone Miner Res;31(5):1099-106. IF:6.3 - 2017: Nat Commun;8(1):121. IF: 12.4 - 2018: Am J Hum Genet;102(1):88-102. IF: 9.9 - 2018: BMJ;362:k3225. IF:27.6 - 2019: Diabetes Care; 43(1):137-144. IF: 13.4
Project Title:	<i>Osteoporosis and Environmental Pollution assessed by a Multi-system Approach</i>
Abstract:	<p>The Genetic Laboratory of the Department of Internal Medicine has a longstanding tradition and reputation in genomics research and epidemiology, positioned as one of the leading centers in the field of genomics of complex diseases worldwide, with particular focus on musculoskeletal diseases. Our approach is multidisciplinary, combining epidemiology with large-scale genomic and (more recently) microbiome research. The lab is also home to the Generation R and Rotterdam Study cohorts and coordinates the EU-Funded Genetic Factors for Osteoporosis Consortium (GEFOS) consortium and the GENomics of MusculoSkeletal traits TranslatiOnal expertise Network (GEMSTONE). Prof. Fernando Rivadeneira has excellent track record in genome-wide association studies (GWAS), the epidemiology of diabetic bone disease and Mendelian Randomization (MR) studies. We offer an interesting and challenging position in an ambitious yet friendly scientific and clinical research environment (http://glimdna.org).</p> <p>PhD project:</p> <p>You will investigate the influence of environmental pollutants in bone health, through the assessment of endocrine-disrupting chemicals in clinically recruited osteoporosis patients. These individuals will also receive extensive radiological scans and hormone tests in a multi-omic approach, to study the potential underlying pathophysiological mechanisms in different organ systems. Also, questionnaires are collected to potentially advise on healthy lifestyle. Data will be analyzed with both conventional statistics and explorative advanced techniques. Further, collaborative side-projects are possible, including: genetics of diabetic bone disease in type 2 diabetes mellitus in big datasets from population-based studies and clinical cohorts, the potential role of the gut microbiome in the relation of type 2 diabetes and bone disease, clinical risk prediction from polygenic risk scores for various diseases.</p>
Requirements of candidate:	<ul style="list-style-type: none"> • We are looking for a highly motivated, hardworking student to join our very international team. Our strength is in using team work to tackle large scientific questions and thus requires a student with good communication skills. • Master degree or MD • Scholarship that will, at least, cover subsistence allowance and international air plane ticket (we could help with the scientific part of your scholarship proposal) • English language requirement: • <i>English speaking countries & Netherlands:</i> no requirement • <i>Other countries:</i> IELTS 7.0 (min 6.0 for all subs), TOEFL 100 (min 20 for all subs)

Erasmus MC, ranked world no. 32 for [Clinical Medicine US News 2020](#) no. 30 [Nature Index for Biomedical Sciences 2019](#)

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Application requirements & Deadlines:

<https://www.eur.nl/en/about-eur/erasmus-university-china-centre/csc-scholarship>

Erasmus MC, ranked world

** No.32 for Clinical Medicine US News 2020:*

<https://www.usnews.com/education/best-global-universities/clinical-medicine?page=3>

** No. 30 Nature Index for Biomedical Sciences 2019:*

<https://www.natureindex.com/supplements/nature-index-2019-biomedical-sciences/tables/healthcare>