Name	**Dr J. Brent RICHARDS, MD, MSc** **Associate Professor**
Affiliation	Associate Professor of Medicine (Tenure)& William Dawson Scholar / FRQS Clinical Research Scholar at the Departments of Medicine, Human Genetics, Epidemiology and Biostatistics at McGill University, in Montreal, Canada & Senior Lecturer, King's College London (Honorary)
IARC Host Group	Genetic Epidemiology Group (GEP), IARC, in collaboration with Dr Paul Brennan
Programme title at IARC	Genetic Epidemiology of Metabolites and Cancer
Academic Degrees	**Master of Science 2006,** Epidemiology and Biostatistics**,** McGill University, Montreal, Canada. **Doctor of Medicine 2000,** University of Calgary, Canada. **Bachelor of Science** (Human Genetics; Biology) **1996**, McGill University, Montreal, Canada.
Residencies/Post doctoral fellowships	**2006-2008 Postdoctoral Fellow,** Genetic Epidemiology, Twin Research Unit, St. Thomas' Hospital, King's College London. **2005-2006 Postdoctoral Fellow,** Epidemiology of Osteoporotic Fractures, McGill University. A Formation Complementaire Fellowship from RAMQ funded this fellowship. **2005 Fellow of the Royal College of Physicians and Surgeons of Canada** in Endocrinology **2005 Fellow of the College des Medecins du Québec** in Endocrinology **2004 Fellow of the Royal College of Physicians and Surgeons of Canada** in Internal Medicine **2003-2006 Endocrinology Fellow,** McGill University**.** Chief Resident 2004-2006 **2000-2003 Internal Medicine Resident,** McGill University. Assistant Chief Resident 2002-2003
Short background	Dr. Brent Richards is an Associate Professor, William Dawson Scholar and FRQS Chercheur Boursier Clinician Scientist, at the Lady Davis Institute of the Jewish General Hospital, at McGill University and a Senior Lecturer at King's College London, UK. Trained in genetics, clinical medicine, endocrinology, epidemiology and biostatistics, Dr. Richards focuses on understanding the genetic determinants of common aging-related endocrine diseases, such as osteoporosis and vitamin D insufficiency. He and his colleagues have made important advances by identifying some of the genes that may cause these diseases. He co-chaired what was world's largest whole-genome sequencing program for common disease and identified a novel and central protein critical to fracture risk through the study over half a million research subjects around the world. Dr. Richards has also used Mendelian randomization to better understand the role of vitamin D in risk of multiple sclerosis and other diseases. His work has been recognized through election as a Member of the Royal Society of Canada, College of New Scholars, and the American Society of Clinical Investigation, and a Canadian Institutes of Health Research Foundation Grant.
5 Selected Publications	1. HF Zheng*, V Forgetta*, YH Hsu*, K Estrada*, A Rosello-Diez*, PJ Leo*, CL Dahia*, KH Park-Min*, JH Tobias*, C Kooperberg*, A Kleinman, U Styrkarsdottir, CT Liu, C Uggla, DS Evans, CM Nielson, K Walter, U Pettersson-Kymmer, S

	McCarthy, J Eriksson, T Kwan, M Jhamai, K Trajanoska, Y Memari, J Min, J Huang, P Danecek, B Wilmot, R Li, WC Chou, LE Mokry, **113 co-authors (all listed below),** RD Jackson†, DW Rowe†, CA Loomis†, DM Evans†, CL Ackert-Bicknell†, AL Joyner†, EL Duncan†, DP Kiel†, F Rivadeneira†, **JB Richards**† for the GEFOS and UK10K Consortia. Whole-genome sequencing identifies *EN1* as a determinant of bone density and fracture. **Nature [IF: 42]**. 2015 Sep 14. doi: 10.1038/nature14878. This article received press coverage from **The Guardian** and was amongst the top 10% of Nature articles receiving coverage in traditional and social media 2. JP Kemp*, JA Morris*, C Medina-Gomez*, V Forgetta, NM Warrington, SE Youlten, J Zheng, CL Gregson, E Grundberg, K Trajanoska, JG Logan, AS Pollard, PC Sparks, EJ Ghirardello, R Allen, VD Leitch, NC Butterfield, DSK Komla-Ebri, A-T Adoum, KF Curry, JK White, F Kussy, KM Greenlaw, C Xu, NC Harvey, C Cooper, DJ Adams, CMT Greenwood, MT Maurano, S Kaptoge, F Rivadeneira, JH Tobias, PI Croucher, CL Ackert-Bicknell, JHD Bassett, GR Williams, **JB Richards**†, DM Evans†. Genome-wide Association Study of Heel Bone Mineral Density Identifies 153 Novel Loci and Implicates Functional Involvement of *GPC6* in Osteoporosis. **Nature Genetics [IF: 28.0].** 2017 Sep 4. Epub ahead of print. I was a co-corresponding author. 3. LE Mokry, S Ross, JA Morris, D Manousaki, V Forgetta, **B Richards**. Genetically decreased vitamin D and risk of Alzheimer's disease. **Neurology [IF: 8.3]**. Published online before print November 16, 2016, doi: http:/ / dx. doi. org/ 10. 1212/ WNL.0000000000003430 4. **JB Richards**,* F Rivadeneira,* M Inouye,* TM Pastinen, N Soranzo, SG Wilson, M Falchi, R Gwilliam, KR Ahmadi, P Arp, P Whittaker, T Andrew, M Jhamai, V Kumanduri, M Moorhouse, JB van Meurs, A Hofman, HAP Pols, D Hart, G Zhai, AM Valdes, BS Kato, BH Mullin, F Zhang, P Deloukas, AG Uitterlinden, TD Spector. Bone mineral density, osteoporosis, and osteoporotic fractures: a genome-wide association study.**The Lancet [IF: 33.8].** 2008 May 3;371(9623):1505-12. This paper received lay press coverage from the **Guardian, Telegraph, Reuters, US World News and Report** and several dozen other news organizations. 5. **JB Richards,** X Yuan, F Geller, D Waterworth, V Bataille, D Glass, K Song, G Waeber, P Vollenweider, KK Aben, LA Kiemeney, B Walters, N Soranzo, U Thorsteinsdottir, A Kong, T Rafnar, P Deloukas, P Sulem, H Stefansson, K Stefansson, TD Spector, Vincent Mooser. Male-pattern baldness susceptibility locus at 20p11 **Nature Genetics [IF: 33.1]** October 2008; doi:10.1038/ng.255
Summary of Research Output	**121 papers** • 18 papers as a first, or co-first author • 35 papers as a senior, or co-senior author • 32 papers with his students as first, or co-first author • 85 papers at an impact factor ≥ 5.0 • 103 papers since his faculty appointment in 2008 • Average journal impact factor for all papers is 10.1 • H-index is 47. This metric means that 45 of my papers have been cited at least 47 times. • His papers have been cited 10,196 times and 1,800 times in 2016 alone. • 28 of his articles have been cited over 100 times and I have led, or co-led, fifteen of these papers.

	• According to Web of Science, twenty-eight of his papers rank in the top 1% of all papers in Clinical Medicine ranked by citations, given the duration of time since publication.
Honours, awards and recognition (a selection of 38 in total)	**2017:** **Elected Member of The American Society of Clinical Investigation. "**The ASCI is an honor society of physician-scientists, those who translate findings in the laboratory to the advancement of clinical practice." Two Canadians were elected to this Society in 2017 and four others since 2010. **Fonds de la Recherche en Santé Quebec. Chercheurs-Boursiers Clinicien, Senior.** Approx $122,000 over 4 years. **Ranked First in Competition.** Salary Award. **CIHR Gold Leaf Prize for Outstanding Achievements by an Early Career Investigator.** Ranked in top 5 of this national competition for researchers within the first ten years of their faculty appointment **IARC/WHO Senior Visiting Scientist Award, International Agency for Research on Cancer, World Health Organization, Lyon France.** $68,000 to help IARC investigators applying genetic epidemiology methods to understand the role of endocrine pathways in cancer predisposition. **2016:** **Elected Member of the Royal Society of Canada, College of New Scholars, Artists and Scientists.** Given to recognize emerging Canadian intellectual leaders who have demonstrated a high level of achievement. **Prix du Jeune Chercheur André-Dupont du Club de Recherches Cliniques du Québec** **André-Dupont Young Researcher Award Québec Clinical Research Society.** Given for excellence in research for a young researcher in Québec. $500 over one year **Clinical Research Scientist of the Year. Lady Davis Institute. McGill University, Faculty of Medicine.** To honour a researcher who has made outstanding contributions to their field of study. $1000. **2015:** **Canadian Society of Clinical Investigation (CSCI) 2015 Joe Doupe Young Investigator Award.** "To recognize outstanding research accomplishments in the first eight years of an investigator's independent career". $1,000 over one year. **William Dawson Scholar Award. McGill University.** To "…recognize a scholar developing into an outstanding and original researcher of world-class caliber who is poised to become a leader in his or her field, similar to that of a CRC Tier 2." $125,000 over five years. **McGill Bravo Award.** To "Celebrate the cream of the researcher crop" at McGill University for"…winners of major provincial, national and international prizes". **2014:** **Canadian Institutes of Health Research and Canadian Society of Endocrinology and Metabolism: Jody Ginsburg Young Investigator Award. "**Given to an individual who has been at a Canadian University for between 5-10 years and has demonstrated excellence as an independent investigator in clinical science." $20,000 over one year for research program costs. **Nomination to the Royal Society of Canada, College of New Scholars, Artists**

	and Scientists. One of 6 faculty members of McGill University Nominated to the Royal Society. I was not selected for this award by the Royal Society.
Current Editorial Board Memberships	**2017:** • Journal of Bone and Mineral Research • Journal of Medical Genetics • Nature Genomic Medicine
Ongoing Research Grants awarded between 2013 to 2023	**2016-2017:** **National Institute of Health (NIH).** Molecular Genetic Studies of von Willebrand Factor. PI: David Ginsburg. **Role: co-investigator**. $1,540,203 USD. Amount received: $15,552 USD. **2016-2023:** **Canadian Institutes of Health Research (CIHR) Foundation Grant.** Declined. "Awarded for sustainable funding for health research leaders for innovative, high-impact research programs." Ranked in the top 2.5th percentile of 911 submissions. **PI: Brent Richards.** Collaborators: George Davey Smith, Douglas Kiel, Mark Lathrop, Matt Maurano, Fernando Rivadeneira, Philippe Sanseau, Stephen Sawcer, Nicole Soranzo, Nicolas Timpson, Cheryl Ackert-Bicknell. $1.89M over 7 years. **2016-2019:** **Canadian Institutes of Health Research (CIHR) Program Grant.** Causal Proteins for Osteoporosis. **PI: Brent Richards**. Collaborators: David Goltzman, Elin Grundberg, Cheryl Ackert-Bicknell, Celia Greenwood. $1.12M over 3 years. **2016-2018** **Merck, Sharpe & Dohme/McGill Faculty of Medicine Grants for Translational Research.** Glucose-Independent Mechanisms for Coronary Heart Disease in Type 2 Diabetes: An Epigenetic Study. **PI: Brent Richards.** Collaborator: Elin Grunberg, Mark Eisenberg. $200,000 over 2 years. **2016-2018** **Multiple Sclerosis Society of Canada + National Multiple Sclerosis Society (co-funded).** The association between BMI and EBV with the risk of MS: A Mendelian randomization analysis. **PI: Brent Richards**. Collaborators: George Davey Smith, Stephen Sawcer. Approx. $168,488.93 over two years. **2015-2017** **Eli Lilly. Lilly Research Award Program.** Somatic Mutations: A Disruptive Paradigm for Identifying Driver Mutations in Autoimmunity. **PI: Brent Richards**. Peer-reviewed, investigator-led grant. 393,805 over 2 years. **2015-2020** **Canadian Institutes of Health Research (CIHR).** Canadian Longitudinal Study on Aging (CLSA) First Followup. **Role: Co-investigator. PI:** Parminder Raina. $41,600,000 over 5 years. **2013 – 2018** **Canadian Institute of Health Research (CIHR), *Canadian Epigenetics, Environment and Health Research Consortium*:** Full Resolution Metabolic Disease Epigenomics in Human Populations. **Role: Co-investigator. PI:** Mark Lathrop. $1.25M over 5 years**. This grant ranked first within the competition**. Funds received: $10,000 per annum.
Institutional webpage:	https://www.mcgill.ca/endocrinology/facultydir/brent-richards