

Curriculum Vitae

Fasil Tekola Ayele

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EDUCATION

PhD Genetic Epidemiology, Brighton and Sussex Medical School, Universities of Brighton and Sussex, UK (2007-2010)

- Dissertation project: The genetics of podoconiosis (Awarded with Uncorrected Pass; Examiner: Professor David Clayton, Cambridge University)
- Developed a clinical staging system for podoconiosis and tested it in the field; trained fieldworkers in rural Ethiopia about its application. The system is now fully in use for follow-up of treatment outcomes. The system was also used for the subsequent genetic study for recruitment of patients. Published in *Trop Med and Int Health*. (Funded by the Association of Physicians of Great Britain and Ireland)
- Explored issues and concerns of informed consent process for genetic research on podoconiosis and developed a locally tailored consent process. The model developed enabled successful recruitment of participants for the genetics study. The work was highlighted in Wellcome Trust's July 31st edition of Science Policy and Related News ('SPIN'). Published in *PLoS NTD* and *BMC Medical Ethics*. (Funded by the Wellcome Trust)
- Mapped podoconiosis susceptibility genes using genomic epidemiology tools (genome-wide association study, family-based association study, human leukocyte antigen association testing, and pathway/network analysis). Published in the *New Eng J Med*. (Funded by the Wellcome Trust)

MPH Public Health, School of Public Health, Addis Ababa University, Ethiopia (2003 – 2005)

- Dissertation project: The economic costs of podoconiosis (endemic non-filarial elephantiasis) in Wolaita zone, Southern Ethiopia
- The study has played a landmark role in informing the burden of podoconiosis so that raising the disease profile. It has been published in *Trop Med and Int Health*

BSc Public Health, Debu University, Ethiopia (1998- 2002)

- Team-based research project: Attitude of women of child-bearing age in Yirgacheffe town towards legalization of induced abortion

EMPLOYMENT

Dec 2010 – present: Postdoctoral Fellow, Center for Research on Genomics and Global Health, National Human Genome Research Institute, National Institutes of Health, Bethesda, MD, USA

- Completed and ongoing research projects that I have been involved include whole genome, whole exome and gene expression studies on podoconiosis in Ethiopia; whole genome study on interleukins among African-Americans; whole exome study on type 2 diabetes among West African and African-American populations; HLA allele prediction using SNP genotypes in an Ethiopian population; population genetic variation among 20 Sub-Saharan African population groups; and genetic structure of a southern Ethiopian population.

June – November 2010: Research Manager, Mossy Foot Treatment and Prevention Association
Addis Ababa Office, Ethiopia

- Liaison with and Manage communication among fieldworkers, the Mossy Foot Treatment and Prevention Association supervisors in Addis Ababa and investigators at the NIH, USA and Brighton and Sussex Medical School, UK.

June – Dec 2008 & June – Dec 2009, Special Volunteer, Center for Research on Genomics and Global Health, National Human Genome Research Institute, National Institutes of Health, Bethesda, MD, USA

- Received hands-on-training on data management (quality control and analysis), design and conduct of genetic, bioethics and epidemiologic studies
- Analyzed data and wrote-up manuscripts on ethical issues, and genetic-epidemiology of podocytosis, and interleukin plasma concentrations

June 2005 – Mar 2007, Research Assistant and Coordinator, National HIV/AIDS Service Provision Assessment Project, School of Public Health, Addis Ababa University, Ethiopia

- Coordinating governmental and non-governmental organizations to develop a working framework, designing and implementation of the first National Health Facility Survey in Ethiopia involving 122 hospitals, and 275 health centers and higher clinics
- Providing technical assistances to the Federal Ministry of Health of Ethiopia in the design, fieldwork, data management, analysis, write-up and dissemination of findings
- Teaching undergraduate and graduate medical and public health students. Courses I lectured include epidemiology, biostatistics, health services management and health economics.

Sep 2002 – Sep 2003, Clinician and Community Health Coordinator, Gindo Health Centre, Ethiopia

- Treatment of patients at outpatient and in-patient clinics; coordinating clinical services; training community and staff of the health center on community health issues

PRIVATE CONSULTATIONS

- Consultant: Evaluation Report of Grassroots Empowerment for Combating HIV and AIDS in Dire, Miyo and Yabello Woredas, Ethiopia, 2010 (Action for Development, Ethiopia)
- Consultant: Assessment of Determinants of Utilization of Maternal and Childhood Services, and Cost of Services Provided in Health Centers in Legambo woreda, Ethiopia, 2010 (Save the Children UK, Ethiopia)
- Consultant: Development of an operational manual for establishment of private wings in public hospitals of Ethiopia and outsourcing of non-clinical services, 2009 (Federal Ministry of Health of Ethiopia, Abt. Associates, Banyan Global USA)
- Consultant: Integrated Management of Neonatal and Childhood Illness Health Facility Survey: Oromia and SNNPR Regions, Ethiopia, 2009 (Save the Children USA- Ethiopia Country Office)
- Coordinator: National Private Health Sector Exhibition in Ethiopia, 2009 (USAID, MAPPP-E, Banyan Global, Abt. Associates)
- Consultant: TB/HIV Service Provision Assessment of Private Health Facilities in Ethiopia: the case of Amhara, Oromia and Addis Ababa regions, 2008 (USAID/PSPE)
- Consultant: Developing National Human Resource for Health (HRH) Strategy in Ethiopia, 2007 (Federal Ministry of Health, JHPIEGO, World Health Organization, Italian Cooperation & World Bank).

- Consultant: Stigma, Discrimination and Denial of Religious Leaders in Ethiopia, 2007 (Ethiopian Interfaith Forum for Development Dialogue and Action).
- Consultant: Assessment of Unit Cost of Health Services for Setting National Health Insurance Premiums in Ethiopia, 2007 (Federal Ministry of Health, World Health Organization, World Bank, USAID-ESHE)
- Co-Investigator: Developing an Alternative Health Financing Model for Debresina District, Wollo, Ethiopia, 2006 (London School of Hygiene & Tropical Medicine and Save the Children UK).
- Research Assistant: Inventory and Synthesis of the Epidemiology and Impact of Trachoma in Ethiopia, 2005 (International Trachoma Initiative-Ethiopia).
- Regional Coordinator: A National Survey of Magnitude and Prevalence of Fistula in Ethiopia, 2005 (The Addis Ababa Fistula Hospital).

PEER-REVIEWED PUBLICATIONS

1. **Tekola Ayele F**, Alemu G, Davey G, Ahrens C. Community-based survey of podoconiosis in Bedele Zuria woreda, southwest Ethiopia. *International Health* 2013 (in press).
2. **Tekola Ayele F**, Adeyemo A, Finan C, Hailu E, Sinnott P, Diaz Burlington N, Aseffa A, Rotimi CN, Newport MJ, Davey G. The HLA class II locus confers susceptibility to podoconiosis. *New England Journal of Medicine* 2012,366(13):1200-8.
3. **Tekola Ayele F**, Adeyemo A, Rotimi CN. Using a “genomics tool” to develop disease prevention strategy in a low-income setting: lessons from the podoconiosis research project. *Journal of Community Genetics* 2012, 3(4):303-9.
4. Doumatey AP, Chen G, **Tekola Ayele F**, Zhou J, Erdos M, Shriner D, Huang H, Adeleye J, Balogun W, Fasanmade O, Johnson T, Oli J, Okafor G, Amoah A, Eghan BA, Agyenim-Boateng K, Acheampong J, Adebamowo C, Gerry NP, Christman MF, Adeyemo A, Rotimi CN. C-reactive protein (CRP) promoter polymorphisms influence circulating CRP levels in a genome-wide association study of African Americans. *Hum Mol Genet.* 2012, 21:3063-72.
5. **Tekola Ayele F**, Hailu E, Finan C, Aseffa A, Davey G, Newport MJ, Rotimi CN, Adeyemo A. Prediction of HLA class II alleles using SNPs in an African population. *PLoS ONE* 2012, 7(6):e40206.doi:10.1371/journal.pone.
6. Bull S, Farsides B, **Tekola Ayele F**. Tailoring information provision and consent processes to research contexts: the value of rapid assessments. *J Empir Res Hum Res Ethics* 2012, 7(1):37-52.
7. Geshere Oli G, **Tekola Ayele F**, Petros B. Parasitological, serological, and clinical evidence for high prevalence of podoconiosis (non-filarial elephantiasis) in Midakegn district, central Ethiopia. *Trop Med Int Health* 2012, 17(6):722-726.
8. **Tekola Ayele F**, Doumatey A, Huang H, Zhou J, Charles B, Erdos M, Adeleye J, Balogun W, Fasanmade O, Johnson T, Oli J, Okafor G, Amoah A, Eghan BA Jr, Agyenim-Boateng K, Acheampong J, Adebamowo CA, Herbert A, Gerry N, Christman M, Chen G, Shriner D, Adeyemo A, Rotimi CN. Genome-wide associated loci influencing interleukin (IL)-10, IL-1Ra, and IL-6 levels in African Americans. *Immunogenetics* 2012, 64(5):351-9.
9. Davey G, Bockarie M, Wanji S, Addiss D, Fuller C, Fox L, Mycoskie M, Gruin M, Tsegaye A, **Tekola Ayele F**, Newport M. Launch of the international podoconiosis initiative. *Lancet* 2012, 379(9820):1004.
10. Alemu G, **Tekola Ayele F**, Daniel T, Ahrens C, Davey G. Burden of podoconiosis in poor rural communities in Gulliso woreda, west Ethiopia. *PLoS Negl Trop Dis*, 2011, 5(6):e1184.
11. Belayneh Y, **Tekola F**, Madeo M, Resti C. Task-shifting of HIV/AIDS services down the professional ladder: Current status in Ethiopia and lessons from other African countries. *Ethiop J. Health Dev*, 2009, 23(3):234-235.

12. **Tekola F**, Bull SJ, Farsides B, Newport MJ, Adeyemo A, Rotimi C, Davey G. Tailoring consent to context: designing an appropriate consent process for a biomedical study in a low income setting. *PLoS Negl Trop Dis*, 2009, 3(7): e482. doi:10.1371/journal.pntd.0000482
13. **Tekola F**, Bull SJ, Farsides B, Newport MJ, Adeyemo A, Rotimi C, Davey G. Impact of social stigma on the process of obtaining informed consent for genetic research on podoconiosis: a qualitative study. *BMC Medical Ethics*, 2009, 10:13. doi:10.1186/1472-6939-10-13.
14. **Tekola F**, Ayele Z, Hailemariam D, Fuller C, Davey G. Development and testing of a de novo clinical staging system for podoconiosis (endemic non-filarial elephantiasis). *Tropical Medicine & International Health* 2008; 13: 1277-1283.
15. **Tekola F**, Reniers G, HaileMariam D, Araya T, Davey G. The Economic impact of AIDS mortality and morbidity on households in Addis Ababa, Ethiopia. *AIDS Care* 2008; 20:995-1001.
16. Davey G, **Tekola F**, Newport MJ. Podoconiosis: non-infectious geochemical elephantiasis. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 2007; 101:1175-1180.
17. **Tekola F**, HaileMariam D, Davey G. Economic costs of podoconiosis (non-filarial elephantiasis) in Wolaita Zone, Ethiopia. *Tropical Medicine & International Health* 2006; 11:1136-1144.

MONOGRAPHS PUBLISHED

- Hailemariam D, **Tekola F**, Ali A, Kumie A, Semie A, Melkamu Y, Lemecha G, Woldu A, Lemma W, Ismail S, Ahmed J, Iyayu Y, Gebre Michael T, Abera E (2007). Ethiopia National HIV/AIDS Related Health Facility Survey, Addis Ababa University, Addis Ababa, Ethiopia. (<http://www.etharc.org/resources/download/finish/33/91>)
- Mitikie G, Tesfaye M, Ayele R, Gadisa T, Enqusillasie F, Lemma W, Berhane F, Yigezu B, Woldu A, Gebrehanna E, **Tekola F**, Yigzaw T, Degefa A, Woldu T (2007). Ethiopian National HIV/AIDS Behavioral Surveillance Survey (BSS), Round II, Federal Ministry of Health, Addis Ababa, Ethiopia. (<http://www.etharc.org/resources/download/finish/33/50>)

INVITED PRESENTATIONS/LECTURES

- The 13th World Congress on Public Health. Addis Ababa, Ethiopia, April 23-27, 2012. *Oral presenter in the Public Health Genomics Session: Public Health Translation of Genomics Research in Developing Countries: An Example from Ethiopia.*
- Instructor in the course (course ID:415.840.92) "Application of Genomics to Public Health Challenges" organized by SBRB/NHGRI and Johns Hopkins Bloomberg School of Public Health (NIH, Bethesda, USA, May 25, 2012). *Lecture topic: Disease prevention in a global health context.*

ORAL PRESENTATIONS AT CONFERENCES

- African Society of Human Genetics and South African Society of Human Genetics Joint meeting, Cape Town, South Africa, March 6-9, 2011. *Title: The HLA class II locus confers susceptibility to podoconiosis (endemic non-filarial elephantiasis). Also poster presentation at the Young Researchers Forum.*
- Global Health Challenges 2010 and Beyond, Royal Society of Tropical Medicine and Hygiene Biennial Meeting, Liverpool, UK, September 8-10, 2010. *Title: Tailoring consent processes in context for research on neglected tropical diseases: the case of podoconiosis research in Ethiopia.*
- Molecular Medicine and Genomics in Africa, Zanzibar, Republic of Tanzania, January 28-31, 2010. *Title: Clinical grades, ethical issues and genetics of podoconiosis*

- National Human Genome Research Institute/National Institute of Health, 2009 Scientific Retreat, Philadelphia, USA, November 17-19, 2009. *Title: The genetic-epidemiology of podoconiosis.*
- Molecular Medicine and Genomics in Africa, Khartoum, Sudan, January 19-24, 2008. *Title: Informed consent process in genetic research.*
- TB and HIV Modeling Conference, Stellenbosch, South Africa, November 6-8, 2006. *Title: The economic impact of HIV/AIDS morbidity and mortality on households in Addis Ababa, Ethiopia*

POSTER PRESENTATIONS AT CONFERENCES

- The 12th International Meeting on Human Genome Variation and Complex Genome Analysis 2011, Berkeley, CA, 8th - 10th September, 2011. *Title: A genome-wide association study in African Americans uncovers loci influencing interleukin (IL)-10, and IL-1Ra plasma levels.*
- NIH Research Festival, Bethesda, USA, October 25, 2011. *Title: A genome-wide association study in African Americans uncovers loci influencing interleukin (IL)-10 and IL-1Ra plasma levels.*
- National Human Genome Research Institute/National Institute of Health, 2008 Scientific Retreat, Philadelphia, USA, October 20-21, 2008. *Title: Trust, autonomy and informed consent: how voluntariness of consent to biomedical research may be subverted in a low-income setting*
- The Association of Physicians of Great Britain and Ireland Annual Meeting, King's College, London, UK, April 5-7, 2006. *Title: Economic costs of podoconiosis (endemic non-filarial elephantiasis) in Wolaita zone, Ethiopia*

OTHER CONFERENCES ATTENDED

- Genetics of the peoples of Africa and the Transatlantic African Diaspora: An international conference. Friday Center, University of North Carolina, Chapel Hill, NC, March 19-20, 2012.
- International Society of Infectious Diseases-Neglected Tropical Diseases (ISID-NTD 2011), Boston, Massachusetts, July 8-10, 2011 (*Attendance and advocacy on podoconiosis*)
- The American Society of Human Genetics Conference, 58th Meeting. Philadelphia, USA, November 11-15, 2008.

OTHER PROFESSIONAL ACTIVITIES

Research Grant

- 2012-2015: MRC IIB Research Grant. £504,189 (PI: Melanie Newport). Discovering podoconiosis susceptibility genes: from molecules to disease control for a 'neglected' NTD. My role: consultant.

Journal Reviewer/editor

- BMC Public Health (2012)
- Progress in Health sciences (2012)
- Travel Medicine and Infectious Disease (2012)
- PLOS Neglected Tropical Diseases (2009, 2010, 2011, 2012- guest editor)
- European Journal of Human Genetics (2011, mentored reviewer)
- International Journal of Medicine and Medical Sciences (2009, 2010)

- Indian Journal of Community Medicine (2009, 2010a,b,c, 2011, 2012)
- Social Aspects of HIV/AIDS Research Alliance (SAHARA) (2009)
- Ethiopian Journal of Health Development (2008, 2010)
- AIDS Care (2008, 2010)
- Educational Research (2010)
- Journal of Public Health and Epidemiology (2010)
- Journal of Peace, Gender and Development studies (2010)

Membership of Committees/Professional Organizations

- Steering Committee member of Footwork, the International Podoconiosis Initiative (www.podo.org).
- International Society of Community Genetics and Genomics, member since 2010.
- Community Genetics Network, member since 2009.
- African Society of Human Genetics, member since January 2008.
- Ethiopian Public Health Association, life member since October 2005.
- American Society of Human Genetics, member since December 2012.

AWARD/SCHOLARSHIP/FELLOWSHIP/RECOGNITION

- Winner of International Alumnus of the Year 2012 – University of Brighton Alumni Association, UK. http://issuu.com/universityofbrighton/docs/the_brighton_effect_issue_29
- 2012 Young Investigator – Genome Technology Magazine, December 2012/January 2013. <http://www.genomeweb.com/clinical-genomics/fasil-tekola-ayeles-genomics-podoconiosis>
- The publication Tekola Ayele et al 2012 *New Eng J Med* had received wide international recognition: the article has been selected as a Continuing Medical Education (CME) activity by the Massachusetts Medical Association; the *New Eng J Med* published an invited perspective article linked with the article; the NHGRI/NIH held a press release (<http://www.nih.gov/news/health/mar2012/nhgri-28.htm>); the Wellcome Trust held a press release (<http://www.wellcome.ac.uk/News/Media-office/Press-releases/2012/WTVM054822.htm>); NIH had included it in the NIH Research Matters news page (<http://www.nih.gov/researchmatters/april2012/04092012foot.htm>); the Fogarty International Center had included it in the May/June Global Health Research Matters newsletter (<http://www.fic.nih.gov/News/GlobalHealthMatters/Documents/ghmmay-jun2012.pdf>); the Scientific American magazine had an invited blog entry highlighting the publication (<http://blogs.scientificamerican.com/guest-blog/2012/04/17/vanquishing-mossy-foot-with-genetic-epidemiology-and-shoes/>); the Center for Disease Prevention and Control (CDC) included the study in 'CDC's picks of the week' (<http://www.cdc.gov/genomics/update/yr2012/apr05.htm>); NIH's Deputy Director for Intramural Research Web Board featured it as the "cover image" for April 2012; and the study led to a new entry for podoconiosis in the Online Mendelian Inheritance in Man (OMIM number 614590, <http://omim.org/entry/614590>). (Funded by the Wellcome Trust)
- Registration Fee Scholarship – The 12th International Meeting on Human Genome Variation and Complex Genome Analysis 2011, Berkeley, California, USA, September 8-10, 2011.
- Young Researcher Oral Presentation Prize – Second place in the African Society of Human Genetics and South African Society of Human Genetics Joint meeting, Cape Town, South Africa, March 6-9, 2011.
- Travel Fellowship – African Society of Human Genetics, Cape Town, South Africa, March 6-9, 2011.
- Travel, tuition fee, accommodation and lodging scholarship – Wellcome Trust Advanced Courses, Genomic epidemiology in Africa, Kilifi, Kenya, Nov 28 – Dec 3, 2010.

- Travel, registration fee, accommodation and lodging scholarship (Bill and Melinda Foundation) – Global Health Challenges 2010 and Beyond, Royal Society of Tropical Medicine and Hygiene Biennial Meeting, Liverpool, UK, September 8-10, 2010.
- Outstanding Poster Presentation Award – NHGRI/NIH 2008 Scientific Retreat, Philadelphia, USA, Oct 21, 2008.
- \$1000 tuition fee scholarship – Basic Linkage and Association Course, Rockefeller University, New York, USA, Aug 2008.
- \$1200 tuition fee scholarship – Summer Institute of Statistical Genetics, University of Washington, Seattle, USA, July 2008.

TRAININGS/SHORT COURSES ATTENDED

- Dec 2012, Second short course on next generation sequencing: technology and statistical methods, Dec 10-13, 2012 (University of Alabama in Birmingham, AL and HudsonAlpha Institute for Biotechnology in Huntsville, AL, USA)
- Nov 2010, Wellcome Trust Advanced Courses, Genomic epidemiology in Africa (Kilifi, Kenya)
- Aug 2008, Basic Linkage and Association Course (Rockefeller University, New York, USA)
- July 2008, Summer Institute of Statistical Genetics (University of Washington, Seattle, USA)
- July 2006, Genetics for Epidemiologists Short Course (Bristol University, Bristol, UK)
- Jan 2008, Molecular Medicine and Genomics in Africa (Khartoum, Sudan)
- Oct 2008, Browsing Genes and Genomes with Ensembl (NIH, Bethesda, USA)
- Sept 2008, The Ethical and Regulatory Aspects of Clinical Research (JHU and NIH, USA)
- Sept - Dec 2007, Health Research Ethics, AMANET-TRUST (online training)