CURRICULUM VITAE

NAME: Eleni Aklillu (PhD, MSc, B.Pharm)

WORK ADDRESS: Division of Clinical Pharmacology, Department of Laboratory of Medicine, Karolinska Institute, Stockholm, Sweden. Email: eleni.aklillu@ki.se

EDUCATION DEGREES

October 1996	**Master of Science (MSc.)** degree in Biochemistry through Karolinska Institutet Research Training program (KIRT) *University:* Medical faculty, Addis Ababa University, Ethiopia.
July 1987	**Bachelor degree in Pharmacy (B.Pharm)** *University:* School of Pharmacy, Addis Ababa University, Ethiopia

DOCTORAL DEGREE

March 2003: Doctorate of Philosophy (PhD) degree in Molecular genetics
University: Department of Environmental Medicine, Karolinska Institutet, Sweden.
Thesis title "Pharmacogenetics of drug metabolizing enzymes with special emphasis on Ethiopians".
http://publications.ki.se/xmlui/bitstream/handle/10616/39161/thesis.pdf?sequence=1. **Supervisor:** Professor Magnus Ingelman-Sundberg

POSTDOC APPOINTMENTS

2003 -2005: ***University*:** Division of Clinical pharmacology, Department of laboratory Medicine, Karolinska Institute, Stockholm, Sweden

ASSOCIATE PROFESSOR

September 2009 – **Associate Professor of Pharmacology**, at the Division of clinical pharmacology, Department of Laboratory medicine, Karolinska Institutet, Stockholm, Sweden

CURRENT POSITION

- October 2005 - to date: Senior research scientist and research group leader at Division of Clinical pharmacology, Karolinska Institutet
- 2014 – 2016: member of the Strategic Advisory Committee for European and Developing Countries Clinical Trial partnership (EDCTP).

PRIOR POSITIONS

2004 -2010	Chief of the Research laboratory and researcher at the Division of Clinical pharmacology, Karolinska Institutet, Stockholm, Sweden.
2003 – 2004	Postdoctoral researcher at Division of Clinical pharmacology, Karolinska Institutet, Stockholm, Sweden.
1998 - 2003	PhD student at Division of Molecular Toxicology, Institute of Environmental medicine, Karolinska Institutet, Stockholm, Sweden.
1997- 1998	Head of Research and Development section at Ethiopian pharmaceuticals manufacturing EPHARM, Addis Ababa, Ethiopia.

1996 - 1997	Researcher at the Institute of Biodiversity Conservation Addis Ababa, Ethiopia.
1995 - 1996	Head of Department of Biochemistry, Jimma Medical University, Ethiopia
1993 - 1995	MSc student in Biochemistry at Karolinska Institute & Addis Ababa University: through Karolinska Institutet Research Training program.
1987 – 1992	Hospital Pharmacist at Black Lion University Hospital, Addis Ababa, Ethiopia.

PHD SUPERVISIONS

List of completed PhD candidates under my supervisions at Karolinska Institutet, Sweden

1) ***Rosa Ghotbi,*:**
   PhD Thesis title: *Genetic, epigenetic and environmental factors of importance for CYP1A2 catalyzed drug metabolism*. (***Main supervisor***)
   Disputation date 2008-12-05. **University:** Karolinska Institutet
   https://publications.ki.se/xmlui/handle/10616/40154

2) ***Mukonzo, Jackson Kijumba B.***
   PhD Thesis title: *Pharmacogenetic aspects of HIV/Aids, tuberculosis and malaria: Emphasis on Ugandan population*. (***Main supervisor***).
   Disputation date 2011-11-11. **University:** Karolinska Institutet
   https://publications.ki.se/xmlui/handle/10616/40764

3) ***Ali, Getnet Yimer, MD*:**
   PhD Thesis title: Incidence, Predictors and Biomarkers for Antiretroviral and/or Anti-Tuberculosis Drugs Induced Liver Injury. (***Main supervisor****)*
   Disputation date 2012-01-27. **University:** Karolinska Institutet
   https://publications.ki.se/xmlui/handle/10616/40855

4) ***Djordjevic, Natasa, MD***:
   PhD Thesis title: *Importance of pharmacogenetic and environmental factors for variation in caffeine disposition: with special emphasis on CYP1A2, CYP2A6, NAT2 and XO*. (***Main supervisor****)*
   Disputation date 2012-04-13. **University:** Karolinska Institutet
   https://publications.ki.se/xmlui/handle/10616/40919

5) ***Ngaimisi Kitabi, Eliford***
   PhD Thesis title: *Optimization of HIV and tuberculosis co-treatment in Tanzanian patients: Emphasis on pharmacogenetics and drug interactions.* ***(Main Supervisor)***
   Disputation date: 2013-04-12, **University:** Karolinska Institutet
   https://publications.ki.se/xmlui/handle/10616/41459

6) ***Abiy Habtewolde, Eyakem***
   PhD Thesis title, *Pharmacokinetic and Pharmacogenetic aspects of drug-drug interactions between antiretroviral and anti-tuberculosis drugs in Ethiopian patients: Implication for optimization of TB-HIV co-treatment*
   Disputation date: 2013-06-03, **University:** Karolinska Institutet
   https://publications.ki.se/xmlui/handle/10616/41541

7) **Sabina Mugusi, MD:**
PhD Thesis title: *Optimization of HIV and Tuberculosis co-treatment in Tanzania: drug-drug interactions and clinical outcomes.* ***(Co-Supervisor)***
Disputation date 2013-02-27. University**: Karolinska Institutet**
https://publications.ki.se/xmlui/handle/10616/41385

8) ***Annika Allqvist*:**
PhD Thesis title: "*The role of CYP3A4/5 in alprazolam metabolism*" (***Co-supervisor****)*

Disputation date 2010-06-04. **University:** Karolinska Institutet

https://publications.ki.se/xmlui/handle/10616/39334

9) **Margareta Ramsjö**
MSc Thesis Title: CYP2C19 and CYP2C9 geno-and phenotypes in healthy Swedish and Korean subjects **.**
Disputation date: 2011-01-13, **University:** Karolinska Institutet
https://publications.ki.se/xmlui/handle/10616/40314

CURRENT SCIENTIFIC ACTIVITY

I am associate professor of pharmacology and leader my own research group at the division of clinical pharmacology, Karolinska Institutet since 2009. I am actively involved in teaching research oriented clinical pharmacology education at the division of clinical pharmacology, Karolinska Institutet since 2003. Over the past 8 years, I received several major external research grants as a principal investigator from external funding agencies including the European and Developing Countries Clinical Trials Partnership (EDCTP), the Swedish research council, Swedish civil contingency agency, Swedish International Development Agency (SIDA) and AstraZeneca. I am supervisor for a total of 15 PhD students (11 from Karolinska Institutet and 4 from African Universities).

Currently I am initiator and principal investigator of five major multinational clinical pharmacology research projects involving > 4000 TB and/or HIV patient cohort in Africa. More than 30 collaborators from European and African Universities in 6 different countries (Sweden, Germany, Ethiopia, Tanzania, Zimbabwe, Uganda) are participating in these projects under my scientific leadership. My PhD students at Karolinska Institutet are working on these clinical research projects under my main supervision. My current research projects involve pharmacogenetics, pharmacokinetics, pharmacodynamics aspects of TB, HIV and Malaria treatment, biomarker discovery and validation for drug induced liver injury using state of the art biomarker discovery technology (Genomics, metabolomics and proteomics) as well as antimicrobial resistance and Hospital acquired infection.

Since January 2014, I am member of the strategic advisory committee (SAC) for European and developing countries clinical trial partnership (EDCTP) http://www.edctp.org/. The Strategic Advisory Committee is the principal advisory group to EDCTP, providing strategic and scientific advice to the EDCTP General Assembly and the Executive Secretariat (SEC), as well as oversight of the scientific

integrity of the EDCTP programme. I am representing EDCTP on the working group for the African Medicines Regulatory Harmonisation (AMRH) Programme (http://www.amrh.org/) whose objective is to fulfill the vision of the Pharmaceutical Manufacturing Plan for Africa.

My research activity in the field of clinical pharmacology in infectious diseases gave me international recognitions and invitations (including by World Congress of Basic and Clinical Pharmacology, African Society of Human Genetics) to deliver presentations at various international scientific conferences: invited for HIV and TB stakeholders expert advisory meetings by European and developing countries clinical trial partnership; write review articles; regularly conduct scientific reviews of articles submitted to more than 20 different international scientific; Invitations to review international grant applications. Results from my clinical research projects helped to design better strategies and guidelines for treatment of HIV, TB and Malaria in resource limited countries as well as antimicrobial resistance, which is becoming a number one global threat.

Over the past 8 years I have made a substantial contribution to knowledge of the pharmacokinetics drug interaction between anti-TB and antiretroviral drugs in TB-HIV coinfected patients. Our large-patient cohort PK studies and population PK models have enhanced knowledge of the established first line HIV drugs, and continue to provide realistic input parameters with well characterized variability for investigators evaluating the pharmacodynamics and treatment outcome. My contribution to understanding and quantifying the pharmacogenetic and pharmacokinetics of drug-drug interactions between the anti-TB drugs and antiretroviral drugs has provided key evidence to support dosing policies employed by programs in resource-constrained settings. I am highly committed to expand my research activities for the development of clinical pharmacology and pharmacogenetics translation into clinical application, teaching of post and undergraduate education in the field clinical research relevant for Global health in general.

Brief description of ongoing research projects in collaborations with multiple national and international research partners:

1. **Project 1:** ***Optimization of TB-HIV cotreatment in Africa: pharmacogenetic and pharmacokinetic aspects of interaction between antiretroviral and anti-tuberculosis drugs.*** This is a multinational research project involving researchers from 6 countries (Sweden, Germany, Ethiopia, Tanzania, Zimbabwe and Uganda). Currently the optimal dose of efavirenz (an antiretroviral drug) to be given with rifampicin is not clear and the current recommendation by the different HIV-TB co-treatment guidelines is inconsistent. The objective is to identify the optimal dose of efavirenz to be given with rifampicin cotreatment in TB-HIV coinfected patients: by evaluating efavirenz pharmacokinetics, pharmacogenetics and treatment efficacy (virologic and immunologic response) and safety (mortality, drug induced liver toxicity, immune reconstitution syndrome, neuropsychiatric toxicity etc) monitored

over one year in HIV only and TB-HIV patients. The study is being conducted in Ethiopia and Tanzania.

2. **Project 2:** ***Randomized clinical trial to identify optimal time to start antiretroviral treatment in TB-HIV coinfected patients receiving anti-tuberculosis therapy***. Tuberculosis (TB) is the most common opportunistic infection and cause of death in HIV infected patients. TB/HIV co-treatment is recommended. However the timing of antiretroviral initiation after starting TB therapy remains controversial. Dispute centered upon whether early start of highly active anti-retroviral therapy (HAART) increases the risk of paradoxical reactions and adverse events or whether delay elevates the risk of disease progression and death. Aim of the study is to determine the most appropriate time to initiate anti-retroviral therapy in HIV/TB coinfected patients who recently started treatment for TB by comparing three treatment strategies of HAART initiation during anti-TB therapy. The study is being conducted in Ethiopia involving > 600 TB-HIV patients, enrolled prospectively and assigned randomly into one of the three treatment groups to start HAART (at one week, 4th week or 8th week after starting TB treatment). Proportion of mortality, morbidity, time to AIDS, adverse events, immune reconstitution, HAART efficacy as measured by viral load and CD4 count and adherence is compared among the different treatment groups after a one-year follow up. Result from the study will help policy makers to establish safe and effective TB/HIV cotreatment strategies and guidelines. Influence pharmacogenetics, pharmacokinetics and duration of therapy on enzyme induction and treatment response are investigated.

3. **Project 3:** ***Discovery and validation of novel biomarkers for drug induced liver injury in human using state of the art biomarker discovery tools.***
   Drug-induced liver injury (DILI) is the leading cause of acute liver failure and a major obstacle of drug development. The standard DILI biomarkers aminotransferase (ALT) and aspartate aminotransferase (AST) lack specificity and sensitivity whereas elevated bilirubin level indicates advanced liver injury. Currently there is no diagnostic biomarkers which can signal an upcoming liver injury before the liver becomes functionally impaired. The present study aims to discover and validate biomarkers for DILI for early signal of DILI from a well characterized patient cohort material with the possibility to follow the time-course of the event using state-of-the-art biomarker discovery technology, genome-wide association-study (GWAS), Proteomics and metabolomics approach. The present study is continuation of an ongoing clinical study whose objective is to identify prevalence prognosis and risk factors for DILI in 1300 HIV and/or tuberculosis infected patients. We monitored liver enzyme level (AST, ALT, ALP and bilirubin) before starting treatment and at different time points during therapy. Pre-treatment and serial plasma and urine samples collected during therapy from patients who developed DILI and who did not (control) are being analyzed for metabolic profile to identify appearance, disappearance or change fold of metabolic or biomarker at different time-course of DILI. Whole genome genotyping and proteomic analysis to discover novel genetic and proteomic biomarkers is ongoing.

4. **Project 4**: ***Healthcare associated infections, antimicrobial use and resistance: an intervention study for rational antimicrobials use, prevention of infection***

   Health care associated infection (HCAI) is a major global health problem causing increased hospital stay, cost of therapy and mortality. Treatment of HCAI is complicated due to high prevalence of antimicrobial resistant pathogen and health-care facilities can act as amplifiers of the outbreaks, increasing the number of new cases occurring. HCAIs are characterized by high rates of antimicrobial resistance and antibiotic use compared with those from community-acquired infections. The present study aims to perform the first controlled intervention testing in Ethiopia through capacity building for early identification and prevention of HCAIs and antimicrobial resistance. The study focuses in two major areas that are inseparable (HCAIs + antimicrobial use and resistance). A three-phase prospective interventional study is being conducted. First baseline surveillance study is done in > 500 Hospital admitted patients to identify the current prevalence, severity, etiology, risk factors, pathogens responsible for HCAIs and antimicrobial resistance, spread pattern, as well as knowledge, practice and attitudes of healthcare staff towards HCAIs. In the 2nd phase, educational interventions are introduced based on the gap and problems identified. In the 3rd phase we will evaluate the impact of intervention.

5. **Project 5:** copy number variations (CNV) in TB-HIV infection and treatment response among Sub-Saharan Africa population. This project investigates associations of copy number variations in genes relevant for predisposition to HIV and TB infection, disease progression, treatment response (virologic and immunologic response) and adverse events such as immune reconstitution syndrome and treatment failure. The study involves >2000 HIV, TB-HIV patients from Tanzania and Ethiopia. The project is being conducted in collaboration with University of Leicester.

6. **Project 6:** Genetic predisposition to violent suicide behavior in Swedish population. This study is being conducted in collaboration with the National Board of Forensic Medicine, Department of Forensic Genetics and Forensic Toxicology, Linköping. My research group is investigating association of genetic variation in serotonin receptors, monoamine oxidase A and tryptophan hydroxylase genetic variation with violent suicide behavior in 600 genomic DNA obtained from completed suicide victims and 500 natural death subjects.

LIST OF SCIENTIFIC PUBLICATIONS

Peer-reviewed scientific publications: n= >60.
Total Google scholar citations score =2507, h-index = 24 (i10-index 39)
Total ISI Web of Science citations score =1644, h-index = 20 (accessed May 2014)

1 Yimer G, Gry M, Amogne W, Makonnen E, Habtewold A, Petros Z, Aderaye G, Schuppe-Koistinen I, Lindquist L, **Aklillu E**. Evaluation of patterns of liver toxicity in patients on antiretroviral and anti-tuberculosis drugs: a

prospective four arm observational study in ethiopian patients. *PloS one* 2014: 9: e94271

2 Sominsky S, Korostishevsky M, Kurnik D, **Aklillu E**, Cohen Y, Ken-Dror G, Loebstein R, Halkin H, Gak E. The VKORC1 Asp36Tyr variant and VKORC1 haplotype diversity in Ashkenazi and Ethiopian populations. *Journal of applied genetics* 2014: 55: 163-171

3 Mukonzo JK, Owen JS, Ogwal-Okeng J, Kuteesa RB, Nanzigu S, Sewankambo N, Thabane L, Gustafsson LL, Ross C, **Aklillu E**. Pharmacogenetic-based efavirenz dose modification: suggestions for an African population and the different CYP2B6 genotypes. *PloS one* 2014: 9: e86919

4 Thulin P, Nordahl G, Gry M, Yimer G, **Aklillu E**, Makonnen E, Aderaye G, Lindquist L, Mattsson CM, Ekblom B, Antoine DJ, Park BK, Linder S, Harrill AH, Watkins PB, Glinghammar B, Schuppe-Koistinen I. Keratin-18 and microRNA-122 complement alanine aminotransferase as novel safety biomarkers for drug-induced liver injury in two human cohorts. *Liver international : official journal of the International Association for the Study of the Liver* 2013: 10.1111/liv.12322 10.1111/liv.12322

5 Ngaimisi E, Habtewold A, Minzi O, Makonnen E, Mugusi S, Amogne W, Yimer G, Riedel KD, Janabi M, Aderaye G, Mugusi F, Bertilsson L, **Aklillu E**, Burhenne J. Importance of ethnicity, CYP2B6 and ABCB1 genotype for efavirenz pharmacokinetics and treatment outcomes: a parallel-group prospective cohort study in two sub-Saharan Africa populations. *PloS one* 2013: 8: e67946

6 Mukonzo JK, Okwera A, Nakasujja N, Luzze H, Sebuwufu D, Ogwal-Okeng J, Waako P, Gustafsson LL, **Aklillu E**. Influence of efavirenz pharmacokinetics and pharmacogenetics on neuropsychological disorders in Ugandan HIV-positive patients with or without tuberculosis: a prospective cohort study. *BMC infectious diseases* 2013: 13: 261. doi: 10.1186/1471-2334-13-261.

7 Machado LR, Bowdrey J, Ngaimisi E, Habtewold A, Minzi O, Makonnen E, Yimer G, Amogne W, Mugusi S, Janabi M, Aderaye G, Mugusi F, Viskaduraki M, **Aklillu E**, Hollox EJ. Copy number variation of Fc gamma receptor genes in HIV-infected and HIV-tuberculosis co-infected individuals in sub-Saharan Africa. *PloS one* 2013: 8: e78165

8 Habtewold A, Amogne W, Makonnen E, Yimer G, Nylen H, Riedel KD, Aderaye G, Bertilsson L, Burhenne J, Diczfalusy U, **Aklillu E**. Pharmacogenetic and pharmacokinetic aspects of CYP3A induction by efavirenz in HIV patients. *The pharmacogenomics journal* 2013: 13: 484-489

9 Gervasini G, Ghotbi R, **Aklillu E**, San Jose C, Cabanillas A, Kishikawa J, Benitez J, Carrillo JA. Haplotypes in the 5'-untranslated region of the CYP1A2 gene are inversely associated with lung cancer risk but do not correlate with caffeine metabolism. *Environmental and molecular mutagenesis* 2013: 54: 124-132

10 Djordjevic N, Carrillo JA, van den Broek MP, Kishikawa J, Roh HK, Bertilsson L, **Aklillu E**. Comparisons of CYP2A6 genotype and enzyme activity between Swedes and Koreans. *Drug metabolism and pharmacokinetics* 2013: 28: 93-97

11 **Aklillu E**, Odenthal-Hesse L, Bowdrey J, Habtewold A, Ngaimisi E, Yimer G, Amogne W, Mugusi S, Minzi O, Makonnen E, Janabi M, Mugusi F, Aderaye G, Hardwick R, Fu B, Viskaduraki M, Yang F, Hollox EJ. CCL3L1 copy number, HIV load, and immune reconstitution in sub-Saharan Africans. *BMC infectious diseases* 2013: 13: 536

12 **Aklillu E**, Djordjevic N, Carrillo JA, Makonnen E, Bertilsson L, Ingelman-Sundberg M. High CYP2A6 Enzyme Activity as Measured by a Caffeine Test and Unique Distribution of CYP2A6 Variant Alleles in Ethiopian Population. *Omics : a journal of integrative biology* 2013: 10.1089/omi.2013.0140 10.1089/omi.2013.0140

13 Yimer G, Amogne W, Habtewold A, Makonnen E, Ueda N, Suda A, Worku A, Haefeli WE, Burhenne J, Aderaye G, Lindquist L, **Aklillu E**. High plasma efavirenz level and CYP2B6*6 are associated with efavirenz-based HAART-induced liver injury in the treatment of naive HIV patients from Ethiopia: a prospective cohort study. *The pharmacogenomics journal* 2012: 12: 499-506

14 Thorn CF, **Aklillu E**, McDonagh EM, Klein TE, Altman RB. PharmGKB summary: caffeine pathway. *Pharmacogenetics and genomics* 2012: 22: 389-395

15 Thorn CF, **Aklillu E**, Klein TE, Altman RB. PharmGKB summary: very important pharmacogene information for CYP1A2. *Pharmacogenetics and genomics* 2012: 22: 73-77

16 Mugusi SF, Ngaimisi E, Janabi MY, Mugusi FM, Minzi OM, Sasi PG, Bakari M, Lindquist L, **Aklillu E**, Sandstrom EG. Risk factors for mortality among HIV-positive patients with and without active tuberculosis in Dar es Salaam, Tanzania. *Antiviral therapy* 2012: 17: 265-274

17 Mugusi S, Ngaimisi E, Janabi M, Minzi O, Bakari M, Riedel KD, Burhenne J, Lindquist L, Mugusi F, Sandstrom E, **Aklillu E**. Liver enzyme abnormalities and associated risk factors in HIV patients on efavirenz-based HAART with or without tuberculosis co-infection in Tanzania. *PloS one* 2012: 7: e40180

18 Hatta FH, Teh LK, Hellden A, Hellgren KE, Roh HK, Salleh MZ, **Aklillu E**, Bertilsson L. Search for the molecular basis of ultra-rapid CYP2C9-catalysed metabolism: relationship between SNP IVS8-109A>T and the losartan metabolism phenotype in Swedes. *European journal of clinical pharmacology* 2012: 68: 1033-1042

19 Hardwick RJ, Amogne W, Mugusi S, Yimer G, Ngaimisi E, Habtewold A, Minzi O, Makonnen E, Janabi M, Machado LR, Viskaduraki M, Mugusi F, Aderaye G, Lindquist L, Hollox EJ, **Aklillu E**. beta-defensin genomic copy number is associated with HIV load and immune reconstitution in sub-saharan Africans. *The Journal of infectious diseases* 2012: 206: 1012-1019

20 Djordjevic N, Carrillo JA, Roh HK, Karlsson S, Ueda N, Bertilsson L, **Aklillu E**. Comparison of N-acetyltransferase-2 enzyme genotype-phenotype and xanthine oxidase enzyme activity between Swedes and Koreans. *Journal of clinical pharmacology* 2012: 52: 1527-1534

21 Yimer G, Ueda N, Habtewold A, Amogne W, Suda A, Riedel KD, Burhenne J, Aderaye G, Lindquist L, Makonnen E, **Aklillu E**. Pharmacogenetic & pharmacokinetic biomarker for efavirenz based ARV and rifampicin based

anti-TB drug induced liver injury in TB-HIV infected patients. *PloS one* 2011: 6: e27810

22 Ngaimisi E, Mugusi S, Minzi O, Sasi P, Riedel KD, Suda A, Ueda N, Janabi M, Mugusi F, Haefeli WE, Bertilsson L, Burhenne J, **Aklillu E**. Effect of rifampicin and CYP2B6 genotype on long-term efavirenz autoinduction and plasma exposure in HIV patients with or without tuberculosis. *Clinical pharmacology and therapeutics* 2011: 90: 406-413

23 Mukonzo JK, Nanzigu S, Rekic D, Waako P, Roshammar D, Ashton M, Ogwal-Okeng J, Gustafsson LL, **Aklillu E**. HIV/AIDS patients display lower relative bioavailability of efavirenz than healthy subjects. *Clinical pharmacokinetics* 2011: 50: 531-540

24 Habtewold A, Amogne W, Makonnen E, Yimer G, Riedel KD, Ueda N, Worku A, Haefeli WE, Lindquist L, Aderaye G, Burhenne J, **Aklillu E**. Long-term effect of efavirenz autoinduction on plasma/peripheral blood mononuclear cell drug exposure and CD4 count is influenced by UGT2B7 and CYP2B6 genotypes among HIV patients. *The Journal of antimicrobial chemotherapy* 2011: 66: 2350-2361

25 Gebeyehu E, Engidawork E, Bijnsdorp A, Aminy A, Diczfalusy U, **Aklillu E**. Sex and CYP3A5 genotype influence total CYP3A activity: high CYP3A activity and a unique distribution of CYP3A5 variant alleles in Ethiopians. *The pharmacogenomics journal* 2011: 11: 130-137

26 Djordjevic N, Carrillo JA, Ueda N, Gervasini G, Fukasawa T, Suda A, Jankovic S, **Aklillu E**. N-Acetyltransferase-2 (NAT2) gene polymorphisms and enzyme activity in Serbs: unprecedented high prevalence of rapid acetylators in a White population. *Journal of clinical pharmacology* 2011: 51: 994-1003

27 **Aklillu E**, Mugusi S, Ngaimisi E, Hoffmann MM, Konig S, Ziesenitz V, Mikus G, Haefeli WE, Weiss J. Frequency of the SLCO1B1 388A>G and the 521T>C polymorphism in Tanzania genotyped by a new LightCycler(R)-based method. *European journal of clinical pharmacology* 2011: 67: 1139-1145

28 Ramsjo M, **Aklillu E**, Bohman L, Ingelman-Sundberg M, Roh HK, Bertilsson L. CYP2C19 activity comparison between Swedes and Koreans: effect of genotype, sex, oral contraceptive use, and smoking. *European journal of clinical pharmacology* 2010: 66: 871-877

29 Ngaimisi E, Mugusi S, Minzi OM, Sasi P, Riedel KD, Suda A, Ueda N, Janabi M, Mugusi F, Haefeli WE, Burhenne J, **Aklillu E**. Long-term efavirenz autoinduction and its effect on plasma exposure in HIV patients. *Clinical pharmacology and therapeutics* 2010: 88: 676-684

30 Mukonzo JK, Waako P, Ogwal-Okeng J, Gustafsson LL, **Aklillu E**. Genetic variations in ABCB1 and CYP3A5 as well as sex influence quinine disposition among Ugandans. *Therapeutic drug monitoring* 2010: 32: 346-352

31 Ghotbi R, Mannheimer B, **Aklillu E**, Suda A, Bertilsson L, Eliasson E, Osby U. Carriers of the UGT1A4 142T>G gene variant are predisposed to reduced olanzapine exposure--an impact similar to male gender or smoking in

schizophrenic patients. *European journal of clinical pharmacology* 2010: 66: 465-474

32 Djordjevic N, Ghotbi R, Jankovic S, **Aklillu E**. Induction of CYP1A2 by heavy coffee consumption is associated with the CYP1A2 -163C>A polymorphism. *European journal of clinical pharmacology* 2010: 66: 697-703

33 Djordjevic N, Carrillo JA, Gervasini G, Jankovic S, **Aklillu E**. In vivo evaluation of CYP2A6 and xanthine oxidase enzyme activities in the Serbian population. *European journal of clinical pharmacology* 2010: 66: 571-578

34 Mukonzo JK, Roshammar D, Waako P, Andersson M, Fukasawa T, Milani L, Svensson JO, Ogwal-Okeng J, Gustafsson LL, **Aklillu E**. A novel polymorphism in ABCB1 gene, CYP2B6*6 and sex predict single-dose efavirenz population pharmacokinetics in Ugandans. *British journal of clinical pharmacology* 2009: 68: 690-699

35 Hilli J, Heikkinen T, Rontu R, Lehtimaki T, Kishida I, **Aklillu E**, Bertilsson L, Vahlberg T, Laine K. MAO-A and COMT genotypes as possible regulators of perinatal serotonergic symptoms after in utero exposure to SSRIs. *European neuropsychopharmacology : the journal of the European College of Neuropsychopharmacology* 2009: 19: 363-370

36 Ghotbi R, Gomez A, Milani L, Tybring G, Syvanen AC, Bertilsson L, Ingelman-Sundberg M, **Aklillu E**. Allele-specific expression and gene methylation in the control of CYP1A2 mRNA level in human livers. *The pharmacogenomics journal* 2009: 9: 208-217

37 **Aklillu E**, Karlsson S, Zachrisson OO, Ozdemir V, Agren H. Association of MAOA gene functional promoter polymorphism with CSF dopamine turnover and atypical depression. *Pharmacogenetics and genomics* 2009: 19: 267-275

38 Yimer G, Aderaye G, Amogne W, Makonnen E, **Aklillu E**, Lindquist L, Yamuah L, Feleke B, Aseffa A. Anti-tuberculosis therapy-induced hepatotoxicity among Ethiopian HIV-positive and negative patients. *PloS one* 2008: 3: e1809

39 Djordjevic N, Ghotbi R, Bertilsson L, Jankovic S, **Aklillu E**. Induction of CYP1A2 by heavy coffee consumption in Serbs and Swedes. *European journal of clinical pharmacology* 2008: 64: 381-385

40 Diczfalusy U, Miura J, Roh HK, Mirghani RA, Sayi J, Larsson H, Bodin KG, Allqvist A, Jande M, Kim JW, **Aklillu E**, Gustafsson LL, Bertilsson L. 4Beta-hydroxycholesterol is a new endogenous CYP3A marker: relationship to CYP3A5 genotype, quinine 3-hydroxylation and sex in Koreans, Swedes and Tanzanians. *Pharmacogenetics and genomics* 2008: 18: 201-208

41 Chavarria-Soley G, Sticht H, **Aklillu E**, Ingelman-Sundberg M, Pasutto F, Reis A, Rautenstrauss B. Mutations in CYP1B1 cause primary congenital glaucoma by reduction of either activity or abundance of the enzyme. *Human mutation* 2008: 29: 1147-1153

42 **Aklillu E**, Leong C, Loebstein R, Halkin H, Gak E. VKORC1 Asp36Tyr warfarin resistance marker is common in Ethiopian individuals. *Blood* 2008: 111: 3903-3904

43 Kishida I, **Aklillu E**, Kawanishi C, Bertilsson L, Agren H. Monoamine metabolites level in CSF is related to the 5-HTT gene polymorphism in treatment-resistant depression. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology* 2007: 32: 2143-2151

44 Josephson F, Allqvist A, Janabi M, Sayi J, **Aklillu E**, Jande M, Mahindi M, Burhenne J, Bottiger Y, Gustafsson LL, Haefeli WE, Bertilsson L. CYP3A5 genotype has an impact on the metabolism of the HIV protease inhibitor saquinavir. *Clinical pharmacology and therapeutics* 2007: 81: 708-712

45 Ghotbi R, Christensen M, Roh HK, Ingelman-Sundberg M, **Aklillu E**, Bertilsson L. Comparisons of CYP1A2 genetic polymorphisms, enzyme activity and the genotype-phenotype relationship in Swedes and Koreans. *European journal of clinical pharmacology* 2007: 63: 537-546

46 **Aklillu E**, Kalow W, Endrenyi L, Harper P, Miura J, Ozdemir V. CYP2D6 and DRD2 genes differentially impact pharmacodynamic sensitivity and time course of prolactin response to perphenazine. *Pharmacogenetics and genomics* 2007: 17: 989-993

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