

Ahmed Hossain, Ph.D.

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Website http://individual.utoronto.ca/ahmed_3

Current

Associate Professor, Department of Public Health,
North South University, Dhaka.

<http://www.northsouth.edu/academic/shls/dph.html>

Education

Jan 2012- Dec 2013, CIHR post-doctoral Research Fellow, Department of Clinical Epidemiology and Biostatistics, McMaster University, Ontario, Canada.

Canadian Institute of Health Research (CIHR) DSECT Award Winner.

<http://www.safeandeffectiverx.com/trainees>

2010 Ph.D. in Biostatistics, Dalla Lana School of Public Health, University of Toronto.

Supervisor: Dr. Joseph Beyene and Dr. Andrew Willan.

Thesis Topic: Contribution to Statistical Techniques for Identifying Differentially Expressed Genes in Microarray Data.

SickKids Research Training Competition (RESTRACOM) Award Winner.

2004 Masters of Science, Biostatistics, McMaster University, Ontario, Canada.

Supervisor: Dr. Narayanaswamy Balakrishnan.

Thesis Topic: Estimation of Parameters of generalized Logistic Distributions based on complete and progressively Type II Censored Samples.

2002 Masters of Science, 1st Class First Position.

Department of Biostatistics and Informatics, University of Dhaka.

2000 Bachelor of Science (3 Years), 1st class First Position.

Department of Biostatistics and Informatics, University of Dhaka.

Journals Editor

1. BMC Research Notes
<https://bmcresearchnotes.biomedcentral.com/about/editorial-board>
2. American Journal of Infectious Disease
<http://thescipub.com/journals/ajid/editors>
3. Journal of Infectious Disease and Immune Therapies
<https://www.scitechnol.com/editorialboard-journal-infectious-diseases-immune-therapies.php>
4. Journal of Oncology Research and Therapy
<http://gavinpublishers.com/oncology-editorial-board/>
5. Advances in Modern Oncology Research
<http://www.advmodoncolres.com/index.php/AMOR/about/editorialTeam>
6. Heighpubs Proteomics and Bioinformatics Research
<http://www.heighpubs.com/hpbr/editors.php>
7. Journal of Obesity and Body Weight
<http://www.henrypublishinggroups.com/henry-journal-of-obesity-body-weight/>

Peer Reviewed Publications

1. Bhavna Srestha and **Ahmed Hossain** (2018) Factors associated with treatment compliance among the hypertensive patients: A hospital-based cross-sectional study in Nepal, *Biomedical journal of Scientific and technical research*, 3(5)
<https://biomedres.us/abstracts/BJSTR.MS.ID.000964.php>
2. Fazle Rabbi and **Ahmed Hossain** (2018), Prevalence and Occupational Factors Associated with Low Back Pain among the Female Garments workers: A Cross-Sectional Study in Bangladesh, *Global Perspectives in Medical Sciences*, 2: 2-8, DOI 10.26535/gpms.v2i1.10
<http://www.journalgpms.com/ojs/index.php/GPMS/article/view/10/30>
3. Paola Muti, Andrea Sacconi, **Ahmed Hossain**, Noa Bossel, Sabina Sieri, Vittorio Krogh, Franco Berrino, Francesca Biagioni, Sabrina Strano, Joseph Beyene, Yossi Yarden, Giovanni Blandino (2017) MiRNA-513a-5p Inhibits Progesterone Receptor Expression and Constitutes a Risk Factor For Breast Cancer: The ORDET Prospective Study, *Carcinogenesis*, 4, DOI:10.1093/carcin/bgx126.
<https://doi.org/10.1093/carcin/bgx126>
4. Sanjoy Sutradhar, GU Ahsan, Hayatun Nabi and **Ahmed Hossain** (2017)

- Occupational factors and Low Back Pain: A Cross-Sectional Study of Bangladeshi Female Nurses, *BMC Research Notes*, 10-173. DOI: 10.1186/s13104-017-2492-1
- <https://bmcresearchnotes.biomedcentral.com/articles/10.1186/s13104-017-2492-1>
5. **Ahmed Hossain**, GU Ahsan and Hayatun Nabi (2017) An Integrated Approach for Identifying Genes Associated with Chemotherapy Resistance in High-grade Serous Epithelial Ovarian Cancer, *Advances in Oncology Research*, 3(1): 31-39. DOI:10.18282/amor.v3.i1.173.
<http://www.advmodoncolres.com/index.php/AMOR/article/view/173>
 6. Samira Irfan, Mahabubul Islam, Omar Faruq, **Ahmed Hossain** (2017) Socio-Demographic Determinants of Adult Tuberculosis: A Matched Case-Control Study in Bangladesh, *American Journal of Infectious Disease*, 2:113. DOI : 10.3844/ajidsp.2017.32.37.
<http://thescipub.com/abstract/10.3844/ajidsp.2017.32.37>
 7. Dilshad Afrin and **Ahmed Hossain** (2017) The school-level factors associated with internet addiction among adolescents: A Cross-Sectional study in Bangladesh, *Journal of Addiction and Dependency*, 3(2): 170-174. DOI: 10.15436/2471-061X.17.1686
 8. **Ahmed Hossain** and Mustapha Musa (2017), Risk factors of severe acute malnutrition among under 5 children: A hospital based case-control study in Bangladesh, *Journal of Medical Sciences and Health*, 03 (03):13-21.
http://jmsh.ac.in/index.php?option=com_k2&view=item&id=88:risk-factors-of-severe-acute-malnutrition-among-under-five-children-a-hospital-based-study-in-bangladesh&Itemid=1
 9. **Ahmed Hossain** and Tasnuva Ahmed (2017) Relationship between gestational weight and antenatal visits among third trimester low-income women: A cross-sectional study in Bangladesh, *Journal of Pregnancy*. 1(3):1-5 DOI: 10.15761/JPR.1000116
<http://www.oatext.com/association-between-gestational-weight-and-inadequate-antenatal-care-visits-among-third-trimester-low-income-women-a-cross-sectional-study-in-bangladesh.php>
 10. **Ahmed Hossain** and Orin Mithila (2016) Sleep duration and treatment compliance: A population-based cross-sectional study of hypertensive patients, *BMC Research Notes*, 2016, 9:271.
<http://bmcresearchnotes.biomedcentral.com/articles/10.1186/s13104-016-2075-6>
 11. **Ahmed Hossain** and T.A. Khan (2016) Identification of genomic markers

- correlated with Sensitivity in solid tumors to Dasatinib using sparse principal components, *Journal of Applied Statistics*, DOI: 10.1080/02664763.2016.1142941.
<http://www.tandfonline.com/doi/abs/10.1080/02664763.2016.1142941?journalCode=cjas20>
12. **Ahmed Hossain** (2015) Bayesian Regression Technique to estimate Area Under Receiver Operating Characteristic Curve and its application to MicroRNA data, *Annals of Biometrics and Biostatistics*, 2(1): 1013.
<http://jscimedcentral.com/Biometrics/biometrics-2-1013.pdf>
 13. **Ahmed Hossain** and Joseph Beyene (2015) Application of Skew-Normal Distribution for detecting differential expression to MicroRNA data. *Journal of Applied Statistics*, vol 1.
<http://www.tandfonline.com/doi/abs/10.1080/02664763.2014.962490#.VERqhGSwI24>
 14. Paola Muti, Andrea Sacconi, **Ahmed Hossain**, Noa Bossel, Sabina Sieri, Vittorio Krogh, Franco Berrino, Francesca Biagioni, Sabrina Strano, Joseph Beyene, Yossi Yarden, Giovanni Blandino (2014) Downregulation of microRNAs 145-3p and 145-5p is a Long-Term Predictor of Postmenopausal Breast Cancer Risk: the ORDET prospective study, *Cancer Epidemiology, Biomarkers and Prevention*. PMID: 25073626 DOI: 10.1158/1055-9965.EPI-14-0398
<http://www.ncbi.nlm.nih.gov/pubmed/25073626>
 15. **Ahmed Hossain** and Joseph Beyene (2013) Estimation of Weighted Log partial Area Under the ROC Curve and its Application to MicroRNA Data, *Statistical Applications in Genetics and Molecular Biology*, 2(6): 743-755. PMID: 24246291 DOI: 10.1515/sagmb-2013-0035
<http://www.degruyter.com/view/j/sagmb.2013.12.issue-6/sagmb-2013-0035/sagmb-2013-0035.xml>
 16. **Ahmed Hossain** and Joseph Beyene (2014) Analysis of Baseline, average and longitudinally measured blood pressure data using linear mixed model. *BMC proceedings*, 8 Suuple 1: S80. DOI: 10.1186/1753-6561-8-S1-S80.
<http://www.biomedcentral.com/1753-6561/8/S1/S80>
 17. **Ahmed Hossain**, Andrew Willan and Joseph Beyene (2013) A flexible nonparametric approach to find candidate genes associated to disease in microarray experiments, *Journal of Bioinformatics and Computational Biology*, 11(2): 1250021 PMID: 23600812, DOI: 10.1142/S0219720012500217.

- <http://www.worldscientific.com/doi/abs/10.1142/S0219720012500217>.
18. **Ahmed Hossain**, Andrew Willan and Joseph Beyene (2013) An Improved method on Wilcoxon Rank Sum Test for Gene selection from Microarray Experiments, *Communications in Statistics-Simulation and Computation* 42(7): 1563-1577.
<http://www.tandfonline.com/doi/abs/10.1080/03610918.2012.667479>
 19. **Ahmed Hossain** and T.A.Khan (2010) Mixtures density estimation in lifetime data analysis: an application of nonparametric Bayesian estimation technique, *Journal of Statistics & Management Systems*, 13(3): 605-615.
http://www.tandfonline.com/doi/abs/10.1080/09720510.2010.10701490#.Ub_mmZVOG5c
 20. **Ahmed Hossain**, Joseph Beyene and Andrew Willan (2009) A Flexible Approximate Likelihood Ratio Test for Detecting Differential Expression in Microarray Data, *Computational Statistics and Data Analysis*, 53(10): 3685-3695.
<http://www.sciencedirect.com/science/article/pii/S0167947309001212>
 21. **Ahmed Hossain**, and Andrew Willan (2007) Approximate MLEs of the Parameters of location-scale Distribution under Type II Censoring, *Statistics: A Journal of Theoretical and Applied Statistics*, 41(5): 385-394.
<http://www.tandfonline.com/doi/pdf/10.1080/02331880701395387>
 22. Balakrishnan, N. and **Ahmed Hossain** (2007) Inference for the Type II Generalized Logistic Distribution under Progressive Type II Censoring, *Journal of Statistical Computation and Simulation*, 77(12): 1013 – 1031.
<http://www.tandfonline.com/doi/abs/10.1080/10629360600879876>
 23. **Ahmed Hossain** and T.A.Khan (2007) Risk factors for sleep disturbance and its effect on quality of life: An analysis of retrospective cohort study of adults with neck injuries, *The Indian Journal of Sleep Medicine*. 2(3): 95-100.
<http://www.indianjournals.com/ijor.aspx?target=ijor:ijsm&volume=2&issue=3&article=005>
 24. **Ahmed Hossain** and T.A.Khan (2007) Risk Factors of Coronary Heart Disease: An Analysis of Framingham Heart Study. *Indian Heart Journal*, 59: 147-151. PMID: 19122248
<http://www.ncbi.nlm.nih.gov/pubmed/19122248>
 25. **Ahmed Hossain** and T.A.Khan (2007) Bayesian Analysis of Three-Way ANOVA Model and a Diagnostic Test for the Convergence of the Estimation, *Journal of Statistics & Management Systems*, 10(1):153-160.
<http://www.tandfonline.com/doi/abs/10.1080/09720510.2007.10701245#.UcCkj5VOG5c>

26. **Ahmed Hossain** and Shahnaz Fazlul Haque (2006) Using Bayesian Approach to Optimize some microbiology data, *BRAC University Journal*, Vol III, 1:65-69.
<http://www.dspace.bracu.ac.bd/handle/10361/552>
27. **Ahmed Hossain** and Enayetur Raheem (2005) A comparison of Nonparametric and Parametric Approaches for Estimating Survival Function, *The AIUB journal of Science and Engineering (AJSE)*, 4:19-24.
http://orp.aiub.edu/pages/ajse_04_01.htm
28. **Ahmed Hossain** and T.A.Khan (2004) Nonparametric Bootstrapping for Multiple Logistic Regression Model Using R, *BRAC University Journal*, 1(2):109-113.
<http://eprints.mdx.ac.uk/3934/>
29. **Ahmed Hossain** (2005) A Comparative Study of Selected Nonparametric Multi-state Approaches for Estimating the Survival Function, *P. Journal of Statistics* 21(2): 209-222.
<http://eprints.mdx.ac.uk/3935/>
30. Taifur Rahman and **Ahmed Hossain** (2018) A case-control study to identify the effect of in-house crowding on childhood tuberculosis among the Bangladeshi Tea-garden workers, *Journal of Infectious Disease and Immune Therapy* (Accepted).
- 31.

Submitted Manuscripts

1. **Ahmed Hossain**, Sathish Pichicka and Joseph Beyene, Review: Differential analysis of microRNA expression data, *Human Genomics* (Under Review).
2. Muti P., Donzelli S., Sacconi A., **Hossain A.**, Frixia T., Ganci F., Sieri S., Krogh V., Berrino F., Biagioni F., Strano S., Beyene J., Yarden Y., Blandino G. miRNA513a-5p is an age-independent long-term predictor of breast cancer in premenopausal women, *Science Translational Medicine* (Under Review).
3. **Ahmed Hossain** Identification of genomic markers to detect Tuberculosis in patients with and without HIV co-infection using sparse principal components, *Statistical applications to Medical Research* (under review).

Experiences

- Jan 2015- Continue** **Associate Professor**, Department of Public Health
North South University, Dhaka.
Taught Courses: Epidemiology I and II, Biostatistics I, Data Management and Analysis, Research Methodology.
<http://www.northsouth.edu/academic/shls/dph.html>
- Jan 2014- Dec 2015** **Adjunct faculty (Summer)**, School of Occupational and Public Health,
Ryerson University, Toronto, Ontario, Canada.
- April 14-Dec 2014** **Principal Biostatistician**
Pharma Medica Research Inc., Mississauga, ON.
- Therapeutic Areas: Oncology, Cardiovascular, Asthma, and Allergy.
 - Maintained and analyzed large databases (Phase I-Phase III) using SAS/ R and interpret the results to Bio-pharmaceutics team.
 - Provided statistical support in the planning of new studies;
 - Estimate appropriate sample size estimation for a design (Adaptive design, parallel design, and crossover design.).
 - Worked in a team environment with clinicians, statisticians, Programmers and others.
- Jan 2013- Apr 2013** **Sessional Lecturer**, Statistical Genomics,
(CIHR **Research** Department of Clinical Epidemiology and Biostatistics, McMaster Uni-
Fellow) versity, Hamilton, Ontario, Canada.
- Feb 08- Dec 11** **Senior Biostatistician, RD8**
Apotex Inc., BioClinical Development, Toronto.
- Lead pharmacokinetic (PK) team of selecting a particular statistical tool for analyzing the highly variable drugs (Trospium, Omega 3, Atorvastatin etc.).
 - Collaborated with other departments, e.g, Clinical development
 - Performed statistical analysis for different phases of clinical trials and interpret results to PK people to ensure validity of conclusions.
 - Developed and improved statistical methodologies for the need of design of experiments and the analysis to proof the bioequivalence.
 - Provided randomization schemes, sample size and power calculations.
 - Wrote statistical reports and statistical section of protocols and data analysis plans.
 - Reviewed and write protocol, SAP and data analysis plan and finalize report for outsourced studies.

- Presented statistical methods that used in different projects.

- May 04-Aug 2004** **Senior Lecturer** (taught courses: Sampling Techniques and Inference)
Department of Mathematics and Physics,
East West University.
- Sep 02-April 2007** **Teaching Assistant** (Biostatistics I and II, Categorical Data Analysis,
Introduction of Statistics including MINITAB)
McMaster University and University of Toronto.
- Apr 2001-Aug. 2002** **Lecturer** (Biostatistics I and II with SAS)
Department of Statistics,
University of Dhaka.
- August, 2006** Supporting Coordinator, NPCDS.
- Conducted an R lab session with **Dr. Rob Tibshirani**.
 - <http://www.fields.utoronto.ca/programs/scientific/NPCDS/06-07/appstat/>

Supervisory Students (137 students)

Few of the students name and their e-mail addresses are in the following:

1. **Fazle Rabbi**, MPH (2017), North South University, [fazle.rabbi04@northsouth.edu]
2. **Bhavna Srestha**, MPH (2017), North South University [bhavanashrestha75@gmail.com]
3. **Kakon Farzana** MPH (2016), North South University [kakonfarjana@yahoo.com]
4. **Sanjoy sutradhar**, MPH (2016), North South University, [sanjoy.sps89@gmail.com]
5. **Orin Mithila**, MPH (2015), North South University [orin.mithi@yahoo.com]
6. **Tasnuva Ahmed**, MPH (2015) North South University [tasnuvaa@gmail.com]
7. **Yasmin Jahan**, MPH (2015), North South University [dr.yasminjahan@gmail.com]
8. **Samia Naz Isha**, MPH (2015), North South University, [samia_isha@hotmail.com]
9. **Mohna Aziz**, MPH (2015), North South University, [mohona.aziz@yahoo.com]
10. **Latifa yasmin**, MPH (2015), North South University, [drlatifaeva@gmail.com]
11. **Farzana Sharmin**, MPH (2015), North South University, [tithisays@yahoo.com]
12. **Shahia Sharmin**, MPH (2015), North South University, [dr.shahiasharmin@gmail.com]
13. **Sathish Chandra Pichika**, MSc (2013), McMaster University, [pichiksc@ms.math.mcmaster.ca]
14. **Ashley Bonner**, MSc (2012), McMaster University [bonnea@math.mcmaster.ca]
15. **Shamim Ahmed Khan**, Msc (2002), Dhaka University [shaahmed777@yahoo.com]

Journal Reviewer

1. PLOS ONE (2)
2. Public Health Nutrition (2)
3. Statistical applications in genetics and molecular biology (5)
4. BMC Medical Genomics (2)
5. BMC Research Notes (22)
6. American Journal of Infectious Disease (12)
7. Cancer Informatics (3)
8. SAGE Open (1)
9. Journal of Statistical Computation and Simulation. (6)
10. International Journal of Bioinformatics Research and Applications (1)
11. The Journal of Rheumatology (5).
12. British Journal of Applied Science & Technology (1)
13. Journal of King Saud University (Science) (1)
14. Computational Statistics and Data Analysis (1)
15. Journal of Statistics & Management Systems (2)
16. WIREs Computational Statistics (1)
17. Annals of Biostatistics and Biometrics (3)

Computer Skills

Statistical S-Plus/R, SAS, MINITAB, SPSS and WINBUGS.

Operating Systems Linux, UNIX, Windows, Mac-OS.

Language L_AT_EX.

Data Management Microsoft SQL server 2008.

HTML Skills

Proficient in HTML code writing and built the following websites:

1. <http://beyene-sigma-lab.com/index.html>
2. http://individual.utoronto.ca/ahmed_3/

Software: Statistical Package for R

An R package for estimating the summary measures of receiver operating characteristic (ROC) curves and their standard errors. It also provides a statistic of weighted log partial area under the curve. These functions are targeted at the use of high dimensional data analysis.

Package name: WLpAUC

Downloadable Website: http://individual.utoronto.ca/ahmed_3

Funding/ Grant

1. April 2016- March 2017, North South University, Johns Hopkins University and NASA collaborative fund, . \$300,000 (Co-Investigator).
2. Feb 2012- March 2014, Winner of CIHR DSECT Award. \$72000.00 per year (Principal Investigator)
3. July, 2005-August, 2008, Hospital for Sick Children Research Training Fellowship (RESTRACOMP), Canada. Total of \$67800.00 for 3 years. (PI)
4. Sept 1998-Aug 2000, KMH fellowship, University of Dhaka. (Covered tuition and \$1500 per year).

Newspaper Writings

1. The neglected health problem of female garments workers, BDnews24, October 27, 2017. <https://opinion.bdnews24.com/2017/10/27/the-neglected-health-problem-of-female-garment-workers/>
2. Can we dream of a smoke-free Dhaka? Published in **Dhaka Tribune**: 01:16 September 3, 2015
<http://www.dhakatribune.com/op-ed/2015/sep/03/can-we-dream-smoke-free-dhaka>
3. Can we be a healthier nation? Published in **Dhaka Tribune**: 00:42 June 1, 2015
<http://www.dhakatribune.com/op-ed/2015/jun/01/can-we-be-healthier-nation>
4. Childhood obesity: A public health problem, Published in **The Daily Star**: 12:00 April 1, 2016
<http://www.thedailystar.net/op-ed/childhood-obesity-public-health-problem-1202452>
5. Chewing the fat, Published in **Dhaka Tribune**: 00:09 April 7, 2016
<http://www.dhakatribune.com/op-ed/2016/apr/07/chewing-fat>
6. Connected and addicted, Dhaka Tribune: 12:02 AM December 11, 2016
<http://www.dhakatribune.com/opinion/op-ed/2016/12/11/connected-and-addicted/>

Consulting Experiences in Funded Projects/ Collaboration

1. May 2015, UN Project, Risk factors for developing periodontitis: A cross-sectional study among the Adults living in slum areas of Bangladesh.
2. October 2015, Knowledge attitude and practice of emergency contraception among the married women attending the OPD at rural Bangladesh.
3. May 2014, Estimating population pharmacokinetic parameters by nonlinear mixed effect models for bioequivalence study. Principal Investigator: Dr Radu Rob, Pharma Medica Research Inc.
4. April 2014, Application of Zero Inflated Negative Binomial distribution model for adherence study. Principal Investigator: Dr Radu Rob, Pharma Medica Research Inc.
5. 2012-2014, Identifying triple negative breast cancer biomarkers, Principal Investigator: Dr. Juliet Daniel [danielj@mcmaster.ca], Department of Biology, McMaster University.
6. 2013, CIHR Grant Writing: Statistical applications for a RNAseq study and power estimation for comparing two survival curves of two groups of mice in clinical trial, Principal Investigator: Dr. Juliet Daniel [danielj@mcmaster.ca], Department of Biology, McMaster University.
7. 2013-14, Degenerative Spondylolisthesis: A prospective study on the role of weakened anterior abdominal musculature on causation, Principal Investigator: Dr. Robert D Fraser and Dr. Kris Dalzell [kris.dalzell@gmail.com], Orthopedic and Spinal Surgeon, Toronto Western Hospital.
8. 2012-2013, From molecular to applied cancer prevention: p53 dependent miRNA signature associated with calorie restriction anti-cancer effect. Principal Investigator: Dr. Paola Muti [muti@mcmaster.ca], Department of Oncology, McMaster University.
9. 2013, Determinants for usability of Rollator: A study of assisted ambulation on Ramps in Older Adults. Principal Investigator: Ivan Solano [Ivan.Solano@uhn.ca], Department of Rehabilitation Science, School of Medicine, University of Toronto.
10. Identifying Clusters from Ministry of Health and Long Term Care related to wound infections among patients with cancer. Principal Investigator: Parvin Iftexhar [Parvin.Eftekhara@uhn.ca], Department of Rehabilitation Science, School of Medicine, University of Toronto.

11. 2012-2013, Identifying differentially expressed microRNAs for hormones and diet in the etiology of cancer (ORDET) study. Principal Investigator: Dr. Paola Muti [muti@mcmaster.ca], Department of Oncology, McMaster University.
12. 2013, Case Study: Characterize and understand the barriers that patients with end stage liver disease from rural communities face in order to obtain an orthotopic liver transplant. Principal Investigator: Max Marquez MD MPH(c) [max.marquez@intransplant.com], Toronto.
13. 2012, Assessing the possible effect of infant sex on the association between maternal smoking and birth weight, Principal Investigator: Dr. Aria Nouri [arianouri9@gmail.com], Toronto Western Research Institute, University Health Network, Toronto.
14. 2011, Meta analysis of prospective cohort studies evaluating the association of recurrent ICH and timing of restarting OAC. Principal Investigator: Dr. Fahad Elchury, Department of occupational health Sciences, McGill University, Montreal.
15. 2010, Analysis of two way steady state design for comparing Diliziazem HCI Caps type TZ 360 mg [FD3123A, Apotex]) and Tiazac Capsules 360 mg [01K108, Biovail]. Principal Investigator: Dr. Anat Fields [afields@apotex.com], Department of Pharmacokinetics, Apotex Inc, Toronto.
16. 2010, SAS program for Reference Replicated Design following protocol by Food and Drug Administration (FDA), Principal Investigator: Dr. Julie Szirtes [jszirtes@apotex.com], Department of Pharmacokinetics, Apotex Inc, Toronto.
17. CHX Project (2010) Phase III Clinical Trial Protocol to assess the effectiveness of a Chlorhexidine Acetate (10% W/V) Dental Varnish, Principal Investigator: Dr. Ross Perry [rossperry@chxtechnologies.com], CHX, Toronto.
18. 2009, Analysis of Three way crossover design (TRR and TTR) following protocol of Food and Drug Administration (FDA), Principal Investigator: Dr. Anat Fields, Department of Pharmacokinetics, Apotex Inc, Toronto.
19. SickKids Project (2006) Relationship Between Changes in Normalized CD 4 Count, Viral Load And Antiretroviral Medications In HIV+ Children, Principal Investigator: Dr. Joseph Beyene [beyene@mcmaster.ca] and Dr. Stanley Read, Sick Kids Research Institute, Toronto.
20. Shire Project (March 2006-April 2006) The Therapeutic Importance Of ADDERALL XR Over Short/ Intermediate Acting Stimulants As a Treatment For ADHD, Principal Investigator: Dr. Sohail Khattak [skhattak@qualiaclinicalservices.com], Shire, USA.

Award and Scholarships

- Travel Award Winner from Genetic Analysis Workshop 18 (Portland, USA) in November, 2012.
- Travel Award winner for SSC presentation from SickKids (Newfoundland) in 2007.
- Recipient of Apotex Award for excellent performance in analytics in 2009.
- University Open Scholarship (2004/09-2010), University of Toronto, Canada.
- University Scholarship (2002/09-2004/04), McMaster University, Ontario, Canada.
- Higher Secondary Scholarship, University of Dhaka, (1994-1998).

Leadership and Professional Memberships

President (September'2007-August'2008), Biostatistics Union of Graduate Students (BUGS), University of Toronto, Canada.

PhD Representative (September'2005-August'2006), Biostatistics Union of Graduate Students (BUGS), University of Toronto, Canada.

Treasurer (September'2004-August'2005) Biostatistics Union of Graduate Students (BUGS), University of Toronto, Canada.

Member Statistical Society of Canada (Since 2003).

Member American Statistical Association (2013).

Continuing Education/ Training/ Conferences

- The 12th International Congress on AIDS in ASIA and the Pacific (ICAAP) Dhaka. November 2015.
- Joint Statistical Meeting 2013, Montreal, Canada: August 2-8 2013.
- Workshop on Skewed statistical models and applications, McMaster University, May 16-17, 2013.
- OVID Journal Search Training, Department of Clinical Epidemiology and Biostatistics, McMaster University. (Short course, February 2013)
- Effective Scientific Writing, (1 day Course, University of Toronto, March 2013)
- Build your website by html, (Online training, 2012).
- RefWorks Training. Department of Clinical Epidemiology and Biostatistics, McMaster University. (Short course, January 2013)
- Oral Presentation Skills, University of Toronto, Toronto ON (short course, 2010)
- Becoming a better editor of your own work, University of Toronto, Toronto ON (short course, 2010)
- Academic Essay Writing, University of Toronto, Toronto ON (short course, 2009)
- Statistical Society of Canada Conferences 2002, 2006, 2009 and 2012.

Presentations (2012-2015)

Contributed Presentations 2012

1. **Ahmed Hossain.** ROC curve and its application on Genomic Analysis, Biostatistics Methodology Unit, Sick Kids Research Institute 2011-3.
2. **Ahmed Hossain.** Inference for Generalized Logistic Distribution of Type II, Stage Seminar Series, University health Network, Toronto 2011-09.
3. **Ahmed Hossain.** An approximate likelihood ratio test method for analyzing microarray data, SSC Meeting 2011, Wolfville, Acadia University, 2012-06.
4. **Ahmed Hossain.** An approximate likelihood ratio test method for analyzing microarray data, Child Health Evaluative Science, Sick Children Hospital, 2012-07.
5. **Ahmed Hossain.** A flexible nonparametric approach to find candidate genes associated to disease in microarray experiments, Department of Clinical Epidemiology and Biostatistics, McMaster University, 2011-12.
6. **Ahmed Hossain.** Assessing Association of Genetic markers with Longitudinally Measured Blood Pressure Data. Genetic Analysis Workshop 18, Portland, USA. 2012-10.
7. **Ahmed Hossain.** MicroRNA expression analysis with a non-parametric method, SIGMA Journal Club & Research Seminar Series, McMaster University, 2012-09.
8. **Ahmed Hossain.** A flexible nonparametric approach for identifying correlated differentially expressed genes in microarray experiments, SSC Meeting 2012, Guelph University, 2012-06.
9. **Ahmed Hossain.** A flexible nonparametric approach to find candidate genes associated to disease in microarray experiments, CE&B 9th Annual Research Day 2012, Sheraton Hotel Hamilton, 2012-03.

Contributed Presentations 2013

10. **Ahmed Hossain.** Estimation of Weighted Log partial Area Under the ROC Curve and its Application on MicroRNA Data. CE&B 10th Annual Research Day 2013, Sheraton Hotel Hamilton, Hamilton, Canada. 2013-03.

Invited Presentations 2013

11. **Ahmed Hossain.** Non-parametric statistical methods for the analysis of high-dimensional genomics data. Department of Mathematics and Statistics, McMaster

University, Hamilton, Canada. 2013-02.

12. **Ahmed Hossain.** Non-parametric statistical methods for the analysis of high-dimensional genomics data. Department of Epidemiology and Biostatistics, Florida International University, Miami, Florida. 2013-05.
13. **Ahmed Hossain.** Robust statistical methods for identifying genes whose expression level correlates with sensitivity of Dasatinib, CIHR DSECT symposium, Hamilton, June 2013.
14. **Ahmed Hossain,** Fitting of the GLIMMIX procedure for modelling blood glucose level in a Type I diabetic clinical trial over time, JAEB center for Health Research, Tampa, Florida, August 2013.

Contributed Presentations 2014

15. **Ahmed Hossain,** Application of skew normal distribution to microRNA data, McMaster University, March 2014.
16. **Ahmed Hossain,** Analysis of pharmacokinetic parameters for a two stage group sequential design, Pharma Medica Research Inc., Toronto, April 2014.
17. **Ahmed Hossain,** Application of skew normal distribution to microRNA data, Retirement celebration of Professor Andrew Willan at Sick Kids Research Institute, Toronto, Sept 2014.

Contributed Presentations 2015

18. **Ahmed Hossain,** Identification of Genomic Markers To detect Tuberculosis in Patients With and Without HIV Co-infection Using Sparse Principal Components, International Conference on AIDS in Asia and Asia-Pacific (ICAAP 12), November 21 2015.
19. **Ahmed Hossain.** Robust statistical methods for identifying genes whose expression level correlates with sensitivity of Dasatinib, North South University, Dhaka, April 2015.
20. **Ahmed Hossain.** Robust statistical methods for identifying genes whose expression level correlates with sensitivity of Dasatinib, BRAC University, Dhaka, April 2015.
21. Muti, Sacconi, **Ahmed Hossain,** Donzelli, Ben Moshe, Ganci, Sieri, Krogh, Berrino, Biagioni, Strano, Beyene, Yarden, and Blandino, Up-regulation of miRNA 513a-5p modulates progesterone receptor expression and represents a long-term biomarker of breast cancer in premenopausal women, February 9 2015, ECRI Research day, Hamilton, Canada.

Areas of Interest

Research

- Development of statistical methodology for healthcare research
- Public health research
- Nonparametric/ Semi-parametric regression models
- Genomic/ high dimensional data Analysis
- Meta Analysis.
- Integrative Analysis.

Teaching

- Categorical Data Analysis
- Statistical Inferences
- Design of Experiments
- Introduction of Statistics/ Biostatistics
- Survival analysis
- Bayesian Analysis.
- Longitudinal Data Analysis.
- Statistical Genomics.
- Epidemiology

Service

- Meta Analysis
- Survival analysis
- Longitudinal data analysis
- Genomic/ high dimensional data analysis
- Randomized Clinical Trials and Observational studies.
- Public health data analysis