# Curriculum Vitae: Mahdi Akbarzadeh, Ph.D. (Biostatistics)



# PERSONAL INFORMATION

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Education				
2003-2007 (B.Sc.)	SAS Programing in statistics Supervisor: Professor Hossein Bevrani	Tabriz University		
2007-2010 (M.Sc.)	Haseman-Elston Regression Model in Genetic Linkage Analysis Supervisor: Professor Hamid Alavi Majd	Shahid Beheshti University of Medical Sciences		
2010-2015 (Ph.D.)	Structural Equation Modeling in Genetic Association and linkage analysis within Family-based studies.  Supervisor: Professor Abbas Moghimbeigi	Hamadan University of Medical Sciences		

# **Publications:**

#### Book:

Biostatistics: Concepts, Methods, and Applications (3<sup>th</sup> edition). [Persian] Authors: Firouz Amani, Yaser Tabaraei, **Mahdi Akbarzadeh**; Sabzevar University of Medical Sciences, publisher, ISBN: 978-600-90198.

#### Papers:

Maryam S. Daneshpour, **Mahdi Akbarzadeh**, Hossein Lanjanian, Bahar Sedaghatikhayat, Kamran Guity, Sajedeh Masjoudi, Asiyeh Sadat Zahedi, Maryam Moazzam-Jazi, Leila Najd Hassan Bonab, Bita Shalbafan, Sara Asgarian, Goodarz Koli Farhood, Niloofar Javanrooh, Maryam Zarkesh, Parisa Riahi, Mohammad Reza Moghaddas, Parvaneh Arbab Dehkordi, Azar Delbarpour Ahmadi, Firoozeh Hosseini, Sara Jalali Farahani, Farzad Hadaegh, Parvin Mirmiran, Fahimeh Ramezani Tehrani, Arash Ghanbarian, Mohammad

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- 12<sup>th</sup> Iranian Statistics Conference, Iranian Statistical Society, Hamid alavi Majd, Parisa Ahmadi, Mahdi Akbarzadeh, Norosadat Kariman. Application of Random Forest Method in Predicting Low Birth Weight Comparing with Logistic Regression Model.
- 3 13<sup>th</sup> Iranian Statistics Conference, Iranian Statistical Society, **Mahdi Akbarzadeh**, Abbas Moghimbeigi, Nathan Morris, Maryam S Daneshpour, Hossein Mahjub, Ali Reza Soltanian. Structural Equation Model In General Pedigree Data Analysis.
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- 1 Journal of Translational Medicine
- 2 Journal of Endocrinological Investigation
- 3 Gene Journal
- 4 BMC Public Health [English].
- 5 International Journal of Endocrinology and Metabolism [English]
- 6 Annals Of Military And Health Sciences Research [English]
- 7 Journal Of Archives In Military Medicine [English]
- 8 Iranian Journal of Orthodontics [English]
- 9 International Journal of Endocrinology and Metabolism [Persian]
- 10 Annals Of Military And Health Sciences Research [Persian]
- 11 Journal of Sabzevar University of Medical sciences [Persian]

# Teaching:

- 1 **Programing with R (Elementary and advanced).** 15-16 November, 2017. National Institute of Genetic Engineering and Biotechnology.
- 2 **Programing with R and its application in genome-wide association studies (GWAS).** 4-5 December, 2019, Pasteur institute of Iran.
- 3 Elementary Programing with R and its application in genome-wide association studies (GWAS). 8-9 January 2020, Research Institute for Endocrine Sciences
- 4 Elementary Programing with R and its application in genome-wide association studies (GWAS). 23-24 June, 2020, Research Institute for Endocrine Sciences.
- 5 **Application of Next Generation Sequencing in Clinical Diagnosis of inherited disorders.**4-5 December, 2019. Pasteur institute of Iran.
- 6 Scientific writing, 17-19 February, 2020, Research Institute for Endocrine Sciences.
- 7 **Biostatistical Methods in medicine (Masters and Ph.Ds.),** Shahid Beheshti University of Medical Sciences.

### **Training:**

- 1 Introduction to the statistical analysis of genome-wide association studies, January 2022: 24, 25, 26, 27, 28; European Society of Human Genetics (ESHG) scholarships, England, Surrey University.
- 2 Linux and Shell Script, May 10, 2018. Research Institute for Endocrine Sciences
- 3 **Scientific writing,** 4-6 February, 2018, Research Institute for Endocrine Sciences.
- 4 Clinical Genomics and NGS (At the ESGM remote training center in Iran), April 28-May 3, 2019
- 5 **Systematic Review and Meta-Analysis**, June 16, 2019. Research Institute for Endocrine Sciences

### **Projects:**

- 1 A genetic-based predictive model for hypertension in a family-based longitudinal cohort study in uncertainty by process based and data-driven models
- 2 Genetic linkage analysis on blood pressure traits in families from Tehran Cardiometabolic and Genetic Study (TCGS).
- 3 Genome Wide Association Study (GWAS) on blood pressure traits in Tehran Cardiometabolic and Genetic Study (TCGS) participants.
- 4 Discovery and validation of structural variations (SV) of type insertion in Iranian genome project by focusing on the people with cardiovascular disease
- 5 Discovery and validation of structural variations (SV) of type inversion in Iranian genome project by focusing on the people with cardiovascular disease
- Investigation of Type 2 Diabetes genetic association with lipid traits mediatory effect in a causality network in an Iranian population: Mixed Structural Equation Modeling

- 7 Estimating the mutational load for type 2 diabetes using Tehran Cardiometabolic Genetic Study (TCGS) data
- 8 Comparison of different solutions to construct genomic relationship matrix by selecting meaningful genomic regions and its application to genome-wide association study of lipid profile traits (Tehran Genetics and Metabolic Study (TCGS)).
- 9 Association of IL-10 polymorphisms and obesity- related variables among the obese and normal weight subjects in Tehran Lipid and Glucose Study (TLGS)
- 10 Investigation the association of variants within ABO and Rh blood group-related genes in Iranian genome sequencing data with Coronary Heart Disease (CHD)
- 11 Survey of resemblance in food patterns of parents-offsprings in different or same family clustering
- 12 Assessment of association between 20 single nucleotide polymorphysm of TPO gene and TPOAb positivity in Tehran Thyroid Study (TTS)
- 13 Tehran Obesity surgery Treatment Study
- Gene-gene and gene environment interactions on primary hypertension in Tehran Cardiometabolic and Genetic Study(TCGS) participants.
- 15 Study of association and heritability of 8 genetic markers in BUD13/ZNF263 locus in high risk families with metabolic syndrome in of Tehran Lipid and Glucose Study (TLGS).
- 16 A systematic review and meta-analysis to assess the association of FTO gene variant with risk of obesity
- 17 Trend of morbid obesity in Tehran and Lipid of Glucose Study
- 18 Report of family history, heratibility and genetic analysis in Tehran lipid and glucose study (20 years)
- 19 Calculation of familial aggregation and heratibility in families with genetic blueprint factors associated with lipid levels in cardiometabolic Tehran
- 20 Calculation of familial aggregation and heratibility of genetic factors associated with diabetes in the family plot Cardiometabolic.
- 21 Common HLA haplotype estimation trough genome wide association data in Tehran lipid and glucose study
- 22 Calculating aggregation and heritability of the thyroid peroxidase autoantibody levels in the Tehran Lipid and Glucose Study (TLGS)population

# **Programming and Software Ability:**

- 1 Linux Bash scripting
- 2 R programming language
- 3 R genetic packages (e.g. kinship2, genetics, gap, . . . )
- 4 Plink (Whole genome association analysis toolset)
- 5 GCTA (a tool for Genome-wide Complex Trait Analysis)
- 6 KING (Kinship-based INference for GWAS)
- 7 Mplus (a latent variable modeling program)

Last Update: 05/23/2023		
	12	