

ABDUL KHADER MOHAMMED M.Sc

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[ResearchGate Profile](#) • [Google scholar citations](#)

EDUCATION

- | | |
|-------------|--|
| 2005 – 2007 | Master Degree in Science/Biochemistry (Second division: 59.2%)
Department of Biochemistry, University College of Science, Osmania University, Hyderabad, India |
| 2001 - 2004 | Bachelor Degree in Science/Microbiology (First division: 65%)
Department of Botany, Bhavans New Science College, Osmania University, Hyderabad, India. |

PROFESSIONAL EXPERIENCE (MORE THAN 8 YEARS)

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| Jan 2010- To date | Research Associate
Biomarkers Research Program, Department of Biochemistry, College of Science, King Saud University, Riyadh, Saudi Arabia. |
| Jul 2008- Jan 2010 | Researcher
Diabetes and Endocrine Research Lab, Department of Biochemistry, College of Science, King Saud university, Riyadh, Saudi Arabia. |

RESEARCH INTEREST/EXPERIENCE

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| Jul 2008- to date | Obesity and Type 2 diabetes represents a major public health problem worldwide. Although changes in lifestyle and environmental factors contribute to the increase in their prevalence, genetic predisposing factors are also important. Over the past eight years, I along with my principal investigators have investigated the role of genetic factors in the pathogenesis of diabetes and obesity using several approaches including candidate gene association studies, analysis of gene polymorphisms and gene expression studies. I am an active member of Biomarkers Research Lab aimed at identifying genetic variants contributing to various chronic diseases. So far, I have identified several genetic loci associated with type 2 diabetes mellitus and obesity, highlighting some novel associations that predisposes to diseases. The finding of these studies were published in good impact journals. |
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Achievements

- Published scientific papers in ISI journals to support the research program.
- Fulfilled research objectives within the grant timelines.
- Prepared final project report for two of the funded projects; Project number (AT-28-94 funded by KACST and 09-ENV662-02 funded by NPST).
- Managed a team of research technicians in conducting molecular genetics experiments.
- Maintained thorough knowledge and understanding of all SOPs, GLP and ISO requirement for research laboratory.

TEACHING EXPERIENCE

Jan 2010- to date

Adjunct Supervisor

Six undergraduate and three post graduate dissertation projects.

Supervised, trained and mentored students in the lab. Taught students to conduct molecular biology experiments (i.e. PCR, RT-PCR, real-time PCR, and RFLP) and protein biology experiments (i.e. ELISA and Luminex) and to analyze the results.

Taught a module of a summer school laboratory course on the principles and techniques of molecular biology (June; 2013, 2014 and 2015).

ACADEMIC RECOGNITION/ AWARDS/ GRANTS

Journal referee

Reviewed manuscripts for the following journals:

- Journal of the Renin-Angiotensin-Aldosterone System.
- BMC Complementary and Alternative Medicine.

Awards

Performance Excellence Award

Based on staff evaluations, earned performance excellence award 2012 at Biomarkers Research Program, King Saud University, Riyadh, Saudi Arabia.

Grants

Research Grants obtained as Co. PI;

Project Code: 11-MED-2086-02

Alternatively Spliced Isoforms of RON (MST1R) as Etiologic Agents in Cancer: Structure and Function Elucidation and Therapeutic Targeting; funded by NPST, Kingdom of Saudi Arabia; September 2012.

Project Code: BIO2646-02-12

Association of gene polymorphisms in the PTH, RANKL and calcium metabolism pathways in Saudi subjects with osteoporosis; funded by NPST, Kingdom of Saudi Arabia; February 2012.

PROFESSIONAL SKILLS

Molecular biology

PCR analysis (real time, multiplex, quantitative, reverse transcription, electrophoretic mobility shift assay, sequencing, single nucleotide polymorphism (SNP) analysis, TaqMan genotyping assay, methylation analysis.

Protein biology

ELISA, western blot analysis, Luminex (bead based multiplexing).

Cell culture

Bacterial and mammalian cell culture.

Technical skills

Well versed in operating various instruments like PCR, Real-time PCR (Biorad and ABI), genetic analyzer (Applied biosystems), ELISA, Luminex, Inverted Microscope, electrophoresis kits, Nano drop Spectrophotometer, Centrifugation.

Computer skills

Microsoft Office, Adobe Photoshop, Statistical Software (SPSS).

LIST OF PUBLICATIONS IN ISI JOURNALS

Articles published-22 (Citations-207; h-index-10)	Impact factor
1. Al-Daghri NM, Mohammed AK , Al-Attas OS, Clerici M, Alenad A, Alokail MS; SNPs in FNDC5 (irisin) are associated with protection from obesity and modulation of glucose and lipid metabolism. Lipids Health Dis. 2016 Mar 11;15(1):54.	2.21
2. Krishnaswamy S, Mohammed AK , Amer OE, Tripathi G, Alokail MS, Al-Daghri NM. Recepteur d'Origine nantais (RON) tyrosine kinase splicing variants lacking exons 18 and 19 occur ubiquitously in lung cancer. Int J Clin Exp Med. 2015 Nov 15;8(11):20778-86.	1.42
3. Al-Daghri NM, Costa AS, Alokail MS, Zanzottera M, Alenad AM, Mohammed AK , Clerici M, Guerini FR. Synaptosomal Protein of 25 kDa (Snap25) Polymorphisms Associated with Glycemic Parameters in Type 2 Diabetes Patients. J Diabetes Res, J Diabetes Res. 2016; 2016:8943092. doi: 10.1155/2016/8943092.	2.17
4. Krishnaswamy S, Mohammed AK , Amer OE, Tripathi G, Alokail MS, Al-Daghri NM. Novel splicing variants of recepteur d'origine nantais (RON) tyrosine kinase involving exons 15–19 in Lung Cancer. Lung Cancer. 2016 Feb;92:41-6.	3.95
5. Alharbi KK, Ali Khan I, Syed R, Alharbi FK, Mohammed AK , Vinodson B, Al-Daghri NM. Association of JAZF1 and TSPAN8/LGR5 variants in relation to type 2 diabetes mellitus in a Saudi population. Diabetol Metab Syndr, 2015 Oct 24;7:92	2.16
6. Al-Shaqha WM, Alkharfy KM, Al-Daghri NM, Mohammed AK . N-acetyltransferase 1 and 2 polymorphisms and risk of diabetes mellitus type 2 in a Saudi population; Ann Saudi Med. 2015 May-Jun; 35(3):214-21.	0.48
7. Al-Daghri NM, Al-Attas OS, Krishnaswamy S, Yakout SM, Mohammed AK , Alenad AM, Chrousos GP, Alokail MS. Association between promoter region genetic variants of PTH SNPs and serum 25(OH)-vitamin D level; Int J Clin Exp Pathol. 2015 Jul 1;8(7):8463-71	1.89
8. Al-Daghri NM, Al-Attas OS, Krishnaswamy S, Mohammed AK , Alenad AM, Chrousos GP, Alokail MS. Association between type 2 diabetes mellitus related SNP genotypes and altered serum adipocytokine levels and metabolic syndrome phenotypes; Int J Clin Exp Med. 2015 Mar 15;8(3):4464-71	1.42
9. Alharbi KK, Richardson GT, Khan IA, Syed A, Mohammed AK , Boustred CR, Gaunt TR, Tamimi W, Al Daghr NM and Day INM. Influence of appetite genotypes in a population of Saudi Arabians where other variables influencing obesity may be reduced; Dis Markers. 2014; 2014:758232. doi: 10.1155/2014/758232.	2.17
10. Al-Daghri NM, Guerini FR, Al-Attas OS, Alokail MS, Alkharfy KM, Draz HM, Agliardi C, Costa AS, Saulle I, Mohammed AK , Biasin M, Clerici M. Vitamin D Receptor Gene	3.73

Polymorphisms are Associated with Obesity and Inflammosome Activity; **PLoS One**. 2014 Jul 14; 9(7):e102141. doi: 10.1371/journal.pone.0102141. eCollection 2014.

11. Alokail MS, Al-Daghri NM, **Mohammed AK**, Vanhoutte P, Alenad A. Increased TNF α , IL-6 and ErbB2 mRNA expression in peripheral blood leukocytes from breast cancer patients; **Med Oncol**. 2014 Aug; 31(8):38. doi: 10.1007/s12032-014-0038-0. Epub 2014 Jun 25. 2.63
12. Al-Daghri NM, Al-Attas O, Alkharfy KM, Khan N, **Mohammed AK**, Vinodson B, Ansari MGA, Alokail MS, Alenad AM. Association of VDR-gene variants with factors related to the metabolic syndrome, type 2 diabetes and vitamin D deficiency; **Gene**. 2014 Jun 1; 542(2):129-33. doi: 10.1016/j.gene.2014.03.044. Epub 2014 Mar 25. 2.20
13. Al-Daghri NM, Abd-Alrahman S, Draz H, Alkharfy K, **Mohammed AK**, Clerici MS, Alokail MS. Increased IL-4 mRNA expression and poly-aromatic hydrocarbon concentrations from children with asthma. **BMC Pediatr**. 2014 Jan 23; 14:17. doi: 10.1186/1471-2431-14-17. 1.98
14. Al-Daghri NM, Alkharfy KM, Al-Attas OS, Krishnaswamy S, **Mohammed AK**, Albagha OM, Alenad AM, Chrousos GP, Alokail MS. Association between type 2 diabetes mellitus-related SNP variants and obesity traits in a Saudi population. **Mol Biol Rep**. 2014 Mar; 41(3):1731-40. doi: 10.1007/s11033-014-3022-z. Epub 2014 Jan 17. 2.51
15. Alharbi KK, Khan IA, Al-Daghri NM, Munshi A, Sharma V, **Mohammed AK**, Wani KA, Al-Sheikh YA, Al-Nbaheen MS, Ansari MG, Syed R.; ABCA1 C69T gene polymorphism and risk of type 2 diabetes mellitus in a Saudi population. **J Biosci**. 2013 Dec; 38(5):893-7. 1.76
16. Hassan MA, Al-Attas OS, Hussain T, Al-Daghri NM, Alokail MS, **Mohammed AK**, Vinodson B; The Q192R Polymorphism of the Paraoxonase 1 gene is a Risk Factor for Coronary Artery Disease in Saudi Subjects. **Mol Cell Biochem**. 2013 Aug; 380(1-2):121-8. 2.33
17. Alkharfy KM, Al-Daghri NM, Alokail MS, **Mohammed AK**, Hussain T, Krishnaswamy S; Influence of Vitamin D Treatment on Transcriptional Regulation of Insulin-Sensitive Genes. **Metab Syndr Relat Disord**. 2013 Aug; 11(4):283-8. 1.65
18. Al-Daghri NM, Clerici M, Al-Attas O, Forni D, Alokail MS, Alkharfy KM, Sabico S, **Mohammed AK**, Cagliani R, Sironi M. A nonsense polymorphism (R392X) in Toll-like Receptor 5 protects from obesity but predisposes to diabetes. **J Immunol**. 2013 Apr 1; 190(7):3716-20. 5.52
19. Al-Daghri NM, Alkharfy KM, Alokail MS, Alenad AM, Al-Attas OS, **Mohammed AK**, Sabico S, Albagha OM. Assessing the contribution of 38 genetic loci to the risk of type 2 diabetes in the Saudi Arabian Population. **Clin Endocrinol (Oxf)**. 2014 Apr; 80(4):532-7. 3.40
20. Al-Daghri NM, Alokail MS, Alkharfy KM, **Mohammed AK**, Abd-Alrahman SH, Yakout SM, Osama E. Amer, Krishnaswamy S. Ethanolic extract of fenugreek caused death of

human T Lymphoma Jurkat cells via autophagy. **BMC Complement Altern Med.** 2012 Oct 30; 12:202. doi: 10.1186/1472-6882-12-202.

21. Alkharfy KM, Al-Daghri NM, Al-Attas OS, Alokail MS, **Mohammed AK**, Vinodson B, Clerici M, Kazmi U, Hussain T, Draz HM. Variants of endothelial nitric oxide synthase gene are associated with components of metabolic syndrome in an Arab population. **Endocr J.** 2012; 59(3):253-63. 2.23
22. Al-Daghri NM, Al-Attas O, Alokail MS, Alkharfy KM, Draz HM, Agliardi C, **Mohammed AK**, Guerini FR, Clerici M. Vitamin D Receptor Gene Polymorphisms and HLA DRB1*04 Cosegregation in Saudi Type 2 Diabetes Patients. **J Immunol.** 2012 Feb 1; 188(3):1325-32. 5.52

ARTICLES IN PROGRESS

Articles under review-3; under preparation-1	Month/year
1. Al-Daghri NM, Mohammed AK , Al-Attas OS, , Clerici M, Alenad A, Alokail MS; Gender-Specific Association between FGFR4 Gly388Arg Gene Variants and Essential Hypertension. (Under review; Genetic Testing and Molecular Biomarkers).	Sep/2016
2. Krishnaswamy S, Mohammed AK , Tripathi G, Alokail MS, Al-Daghri NM. RON splice variants skipping exons 11 and 11 to 13 in lung cancer identified by PCR amplification and sequencing. (Under review; BMC Molecular Biology).	
3. Krishnaswamy S, Mohammed AK , Tripathi G, Alokail MS, Al-Daghri NM. Splice variants of the extracellular region of RON receptor tyrosine kinase in lung cancer cell lines identified by PCR and sequencing (Under review; BMC Cancer).	
4. Vitamin D Receptor Gene Polymorphisms predict metabolic response to 12 Months Vitamin D supplementation in type 2 diabetes Patients (Under preparation)	

PAPERS AND POSTERS PRESENTED IN CONFERENCES

Oral presentation	Mohammed AK, Alokail MS, Wani K, Al-Daghri NM ; Differences in the Metabolic Effects of a 12-Month Vitamin D Supplementation According to Vitamin D Receptor (VDR) Genotypes; The Second Vitamin D Symposium (20-21 January 2016)
Oral presentation	Mohammed AK , Al-Daghri NM, Al-Attas O, Alokail MS, Alkharfy KM, Draz HM, Agliardi C, Guerini FR, Clerici M Vitamin D Receptor Gene Polymorphisms are Associated with Obesity and Inflammation Activity in Saudi Arabians; The Second International Conference of The Saudi Osteoporosis Society (12-13 March 2014) Riyadh, Saudi Arabia.
Poster	Ansari MGA, Al-Daghri NM, Al-Attas O, Alkharfy KM, Khan N, Mohammed AK , Vinodson B, Alokail MS, Alenad AM. Interaction of VDR-Gene Variants with Factors Related to the Metabolic Syndrome, Type 2 Diabetes and Vitamin D Deficiency. The Second International Conference of The Saudi Osteoporosis Society (12-13 March 2014) Riyadh, Saudi Arabia.

- Poster Al-Daghri NM, Alkharfy KM, Alokail MS, Alenad AM, Al-Attas OS, **Mohammed AK**, Sabico S, Albagha OM Replication of genome wide association-validated loci for type 2 diabetes mellitus in the Saudi Arabian population; **Endocrine Abstracts (2013) 31 P195 DOI:10.1530/endoabs.31.P195**; <http://www.endocrine-abstracts.org/ea/0031/ea0031P195.htm>
- Poster Draz HM, Al-Daghri NM, Al-Attas O, Alokail MS, Alkharfy KM, Agliardi C, **Mohammed AK**, Guerini FR, Clerici M. Vitamin D Receptor Gene Polymorphisms and HLA DRB1*04 Cosegregation in Saudi Type 2 Diabetes Patients. Poster presentation at the First Saudi Osteoporosis Society International Conference (6-8 March 2012) Riyadh, Saudi Arabia.

CONFERENCES, TRAINING COURSES AND WORKSHOPS ATTENDED

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| Conference | 1. Nutrition and Health Series (6 April 2015), Riyadh, Saudi Arabia. |
| Workshop | 2. Introduction to FP7 European funding for research and innovation (10 April 2012) King Saud university, Riyadh, Saudi Arabia |
| Conference | 3. The first international conference of the Saudi osteoporosis society (6-8 march 2012) Riyadh, Saudi Arabia. |
| Workshop | 4. Updates on Osteoporosis (10 January 2012) King Saud University, Riyadh, Saudi Arabia. |
| Training Course | 5. The Art of good Research: How to make it happen (01 March 2011) King Saud University, Riyadh, Saudi Arabia. |
| Workshop | 6. Fourth international conference of biomarkers in chronic diseases (4-6 May 2010) Riyadh, Saudi Arabia. |
| Quiz | 7. Biochemistry in the New Millennium/Quiz (3-4 September 2005) Hyderabad, India. |

ACKNOWLEDGEMENTS IN ARTICLES

- | Role | |
|----------------------|---|
| Technical assistance | 1. Al-Attas OS, Hussain T, Al-Daghri NM, Rosas ED, Kazmi U, Vinodson B. The Relationship between a Mediterranean Diet and Circulating Adiponectin Levels is influenced by Cigarette Smoking J Atheroscler Thromb. 2012 Dec 27 |
| Technical assistance | 2. Al-Daghri NM, Al-Attas OS, Alokail MS, Alkharfy KM, Hussain T, Yakout S, Vinodson B, Sabico S. Adiponectin gene polymorphisms (T45G and G276T), adiponectin levels and risk for metabolic diseases in an Arab population Gene. 2012 Feb 1; 493(1):142-7. Epub 2011 Dec 1. |
| Technical assistance | 3. Hussain T, Al-Daghri NM, Al-Attas OS, Draz HM, Abd Al-Rahman SH, Y akout SM. Plasma neuropeptide Y levels relate cigarette smoking and smoking cessation to body weight regulation. RegulPept. 2012 Jun 10; 176(1-3):22-7. doi: 10.1016/j.regpep.2012.02.005. Epub 2012 Feb 28. |
| Technical assistance | 4. Khalid M. Alkharfy, Nasser M. Al-Daghri, Omar S. Al-Attas, Majed S. Alokail, Hossam M. Draz, and Tajamul Hussain Endothelial Nitric Oxide Synthase Gene Polymorphisms (894GOT and 786TOC) and Risk of Coronary Artery Disease in a Saudi Population Arch Med Res. 2010 Feb;41(2):134-41. Epub 2010 Mar 27. (Technical Assistance). |

ONGOING RESEARCH**Role**

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|--------------------|--|
| Co-P. Investigator | 1. Association of gene polymorphisms in the PTH, RANKL and calcium metabolism pathways in Saudi subjects with osteoporosis; NPST-Funded (BIO2646-02-12), Kingdom Saudi Arabia |
| Co-P. Investigator | 2. Alternatively Spliced Isoforms of RON (MST1R) as Etiologic Agents in Cancer: Structure and Function Elucidation and Therapeutic Targeting; funded by NPST, Kingdom of Saudi Arabia. |
| Technical expert | 3. Epigenetic approaches to determine the epigenomic activation in bone cancer cells. (Funded; KACST) |

PERSONAL

Name	Abdul Khader Mohammed
Father name	Khasim Ali Mohammed
Date of birth	05/04/1983
Gender	Male
Marital status	Married
Nationality	Indian
Languages known	English, Urdu, Hindi, Telugu and Arabic (Conversational)
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