



# Prof. KHALID KHALAF ALHARBI

B.Sc., M.Sc., Ph.D.

Professor and Consultant of Medical Molecular Genetics

Chairman of Saudi Society of Clinical Laboratory Sciences

# **CURRICULUM VITAE**

# Personal details and communication

- Date of Birth: 1392 (Hijri)/1972 (Gregorian)
- Professor in Medical Genetics
- Consultant in Medical Laboratories
- Department of Clinical Laboratory Sciences
- College of Applied Medical Sciences
- )Mobile : ( 00966500082358
- )Office : (00966114693732 Fax00966114693738 :
- Email ID: kharbi@ksu.edu.sa
- PO Box : **10219**
- Riyadh : **11433**

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# **Scientific Data:**

- PhD in Detection of Human Mutations: Development and Screening with Human Genetics Division (2000-2004), Faculty of Medicine at University of Southampton, United Kingdom.
- M.Sc. in Medical Molecular Genetics in Molecular and Cell Biology (1999-2000), Department at University of Aberdeen, Scotland, United Kingdom.
- B.Sc. in Department of Clinical Laboratory Sciences, College of Applied Medical Sciences, King Saud University with *Second class honor* (GPA 4.36 out of 5), (1991-1996) in Riyadh, Kingdom of Saudi Arabia.

# **Administrative Work:**

- One year of Internship (6 July 1996 to 7 July 1997) at King Fahad National Guard Hospital in pathology Laboratory, Riyadh, SA.
- Medical Technologist employee (1997), in Cytogenetics, Department of Pathology and Laboratory Medicine in King Fahad National Guard Hospital, Riyadh, SA.
- Joined King Saud University as Academic staff in College of Applied Medical Sciences as Demonstrator in Clinical Laboratory Sciences Department (from 1 September 1997 to 2004) in King Saud University, Riyadh, SA.
- Delta Medical Laboratories (private clinic for Clinical Pathology) as a part time (20 August 1997-12 February 1998), Riyadh, SA.
- Training in laboratory for molecular genetics technique & DNA diagnostics with Dr. Kambouris (1998) in Research Centre, King Faisal Specialist Hospital and Research Center, Riyadh, SA.
- Training in Dr. Alaster Cumming Laboratory, University of Aberdeen as Part of my M.Sc. project (PCR, Restriction Enzyme, Statistical analysis ...ect) for four months in 1999-2000, Aberdeen, UK.
- Training in Professor Ian Day Laboratory, University of Southampton as part of my PhD project (PCR, ARMS, DHPLC, Direct Sequencing, melt-MADGE...ect) for Three years in 2000-2004
- President of Southampton Saudi Student Club in Southampton for one year 2001-2002. Supported and organized by Saudi Arabian Embassy in UK.
- Journal Club organizer in Human genetics Division for students and staff (2001-2002) in School of Medicine, University of Southampton, UK.
- Presenters for PhD students in Human Genetics Division (2001-2004), School of Medicine, University of Southampton, UK.
- Vice-manager and established Southampton Saudi Student School (2002-2003). School funded and supported by Saudi Arabian Embassy in UK.
- Chairman of sport activity in College of Applied Medical Sciences (2004-2005), KSU, Riyadh, SA.



- Head of the committee following the demonstrator and graduate student who study M.Sc. and Ph.D abroad from the college (2004-2005), KSU, Riyadh, SA.
- Member of the committee Internship student in the college (2004-2005), KSU, Riaydh, SA.
- Member of following the exams in the health colleges (2004-2005) and 2010, KSU, Riyadh, SA.
- Member of organize the 50 years of KSU from the college, Riyadh, SA.
- Member of the college organizes a week against the tourism (2005) in KSU, Riyadh, SA.
- Member of developing the education in the college (2004-2005) in CLS, Riyadh, SA.
- Member of employ demonstrator in the department of CLS (2004-2005), KSU, Riyadh, SA.
- Chairman of Clinical Laboratory Sciences in College of Applied Medical Sciences in King Saud University (2005- 2009); (two years from 2005-2007 and extended for another two years).
- Training in Professor Ian Day Laboratory, in Human Genetics Division, University of Southampton in summer 2005 for 2 months in (PCR, Microarray, Odyssey, Idaho technologies lighter type and high scanner for SNP) from July-September 2005.
- Work as part time consultant in laboratory and medical manager in privet polyclinic (Dr. Alia polyclinic) for one year from Oct. 2005 till 2006.
- Work as part time consultant in laboratory in privet polyclinic (Trust Medical Centre) from. 2006 till 2008.
- Examiner in M.Sc. thesis submitted for Clinical Laboratory sciences in King Saud University in Riyadh. Title: Study of serum Ferritin and other hematological parameters in pregnancy set in 13/12/2006 in College of Applied Medical Sciences in Riyadh, KSA.
- Postdoctoral summer training (Summer 2007) in department of social medicine in University of Bristol, UK funded by British Council 2007, Sponsor by British council in Riyadh.
- Vice Chairman and established Saudi Society of Clinical Laboratory Sciences' in King Saud University 2008 (<u>www.sscls.org.sa</u>).
- Member of Health Sciences Research Centre and established in King Saud University (Prince Naif Health research Centre) 2008-2010.
- Member of research centre in college of Applied Medical Sciences in KSU 2010-2011 at college, KSU, Riyadh.
- Program manager of faculty in strategic plan of King Saud University from February 2010-2011 which implanted to 2030 as KSU2030 Strategic plane, KSU, Riyadh.
- Member of examiner for creativity in King Abdulaziz and his companions' foundation for giftedness and creativity in Riyadh 2009.
- Dean College of Nursing from June 2010-2015 at KSU, Riyadh.



- Member of examiner for selecting health colleges' students in interview summer 2010, 2011, and 2013, KSU, Riyadh.
- Professor in Medical Genetics in Clinical Laboratory Sciences from December 2015up-to-date.
- Member of Scientific Committee Board at King Saud University 2013 for two years, Riyadh, Saudi Arabia.
- Member of publication committee at King Saud University 2013, Riyadh, Saudi Arabia.
- Member of High Committee in Medical University city in King Saud University, 2014, Riyadh.
- Chairman and Creative of Saudi Society for Clinical laboratory sciences, King Saud University, 2015 up-to-date, Riyadh, Saudi Arabia
- Head of different board and committee in CLS departments and in CAMS.
- Member of Board Saudi Society for Clinical Chemistry from 2018- up to date in Saudi Commission for Health specialty.

# Memberships:

- Membership and creative of Saudi Society of Clinical Laboratory Sciences (www.sscls.org.sa)
- Membership of Saudi Genetics Diseases health.
- Membership of Chair of Medical Molecular Genetics in College of Applied Medical Sciences
- Membership of Chair of Obesity in College of Medicine
- Membership in HUGO (Human genome organization)
- ME-genetics (Association of geneticists in Middle East)
- ASMT (Association of Saudi Medical Technologists)
- ASTF (Arab Science and technology foundation)
- Journal membership: Annals of Saudi Medicine, The Scientist, Endocrinology, Euro Biotech and Online: Nature Genetics. A membership of Biochemical Society, UK.



## **Courses attended**

1. First Aid Course by Saudi Heart Association (11 Jan. 1994 to Jan. 1995) in King Saud University, Instructor: Dr. Roellada. Riyadh, SA

2. English course in Saudi School of English Language and Computer Programming (1995) in Al-Qassim, SA.

**3.** Intermediate English course (October 1996 to May 1997) in National Guard, Health Affairs in King Fahad Hospital, Riyadh, SA.

4. Computer courses (1997) in Kingdom Institute for Computer Technology in Riyadh, SA.

5. Preparation Course for TOEFL (1997) in the Horizon Institute for Languages, Riyadh, SA.

6. Academic English Course (18 September –17 December 1998).in Newnham Language Centre (NLC) school, Cambridge, UK

7. English for speakers of other languages 2 Course (March 1999) with Scottish qualification authority no. 985102449 in Aberdeen College, Aberdeen, UK.

8. Introduction to computer application packages (July 1999) with Scottish qualification authority no. 985102449 in Aberdeen College, Aberdeen, UK.

9. Introduction to computer course (May 1999) with Scottish qualification authority no. 985102449 in Aberdeen College, Aberdeen, UK.

10. The internet 1 course (August 1999) in Aberdeen College, Aberdeen, UK.

**11.** Teaching and Demonstrating (October 2003), Centre for Learning and Teaching in University of Southampton, UK.

**12.** Active Learning in large Groups (March 2003), Centre for Learning and Teaching in University of Southampton, UK.

**13.** Presenting Your Research at Conferences (June 2003) Centre for Learning and Teaching in University of Southampton, UK.

14. Supervising Research Students (2004), Centre for Learning and Teaching in University of Southampton, UK.

**15. Motivating Student Learning (2004), Centre for Learning and Teaching in University of Southampton, UK.** 

16. Innovations and Assessment (2004), Centre for Learning and Teaching in University of Southampton, UK.

17. Workshop of new technology and their application in education in King Saud University (9 November 2004 and 20 February 2005) in KSU, Riyadh, SA.

18. Workshop of education files for teaching in King Saud University (Feb 2009) in KSU.

19. Workshop of managing time in King Saud University (March 2010) in KSU, Riyadh.

20. Workshop and course for diploma in education from Kings College in London from July 2009 till July 2010 (<u>http://www.kcl.ac.uk/learningteaching/kli/</u>).

21. Strategic workshop for health colleges by cooperation between Harvard Medical School and KSU, in Medical College in Riyadh 2010.



22. Workshop and training for KSU strategic plan implementation team by IIR Middle East (Balanced scorecard forum Saudi Arabia), 10-15 Dec, 2010, Riyadh.

23. Workshop for the use of concept mapping in college teaching by development and skills deanship at KSU 2010, Riyadh.

24. (Program for educators in the health profession) January 8-20, 2011 and May 15-20, 2011, Organized by Harvard Macy Institute in The Harvard Medical School, in Boston, USA.
25. (Teaching and Assessment course) from 3-9 July 2011 by Centre for medical education, University of Dundee, Dundee, Scotland, UK.

26. I have attended and chairperson more than 85 conferences from 2011-2020.

27. Attended and speaker in MEDLab 2017-2019 in Dubai.

28. Attended and chairperson in all annual conferences for Saudi Society for Clinical chemistry from 2017- 2020, from third to fifth.

29. Attended and chairperson in all annual conferences for Saudi Society for Clinical Laboratory Sciences from 2011- 2020.

# **Grants**

- I have the grant of 1,712,000.00 SR from NPST for Molecular Genetic Epidemiology and Consanguinity: Phase I Population based study in Saudi Arabia. MED 2106-02 (January 2014-December 2015) Funded by NPST, King Saud University, Riyadh, Kingdom of Saudi Arabia.
- I am a Co-I for NPST project 1,615,000.00 SR in the project entitled Screening of miRNA signatures as diagnostic markers of colorectal cancer metastasis, funded by NPST 2014, King Saud University, Riyadh, and Kingdom of Saudi Arabia.
- I have a grant for 25,000 SR for Screening for Genetic mutations of LDL receptor gene polymorphisms in Familial hypercholesterolemia patients in the Saudi Arabia (Grants adopted from Research Centre, College of Applied Medical Sciences, KSU).
- I have a grant for 40,000 SR for Low Density Lipoprotein Receptor gene polymorphism studies in the Hypercholesterolemia individuals from the Saudi population (Grant has been sanctioned from the KACST) 2013.
- I have a grant for 150,000 SR from Deanship of Scientific Research, King Saud University (RGP-VPP-244) 2013-2014.
- I have a grant for 70,000 SR in the project entitled "Molecular genetic studies in Saudi population; identified variants from GWAS and Meta-analysis in Ischemic Stroke" from Stroke Research Chair, Majmah University, Saudi Arabia.



## **Master Students Supervision:**

- I had supervised the Master's student: Omar S. Aljabri in King Saud University with the thesis title: Relationship between serum amyloid A1 SAAI gene and obesity in Saudi population. (2018-2019).
- I had supervised the Master's student: Naif T.M. Almutairi in King Saud University with the thesis title: Relationship between neuropeptide Y gene polymorphism and obesity of first-cousin offspring in the Saudi population. (2018-2019).
- I had supervised the Master's student: Abdullah Sulaiman Alsaikhan in King Saud University with the thesis title: Screening of mitochondrial mutations in the Saudi women with gestational diabetes mellitus: a non-replicative case-control study (2018-2019).
- I had supervised the Master's student: Amani Alshebekey master Student in Prince Naif University with thesis title: Glucose-6-Phosphate Dehydrogenize Deficiency (2016-2017).
- I had supervised student name: Alaa Salem Abed Student No: 430101291 in CLS with thesis title: Screening of Glucose-6-Phosphate Dehydrogenize Deficiency for Donors in Taif City in Kingdom of Saudi Arabia. 2010-2012.
- I had supervised student name: Wejdan Hamad Al-Hussaini Student No: 430202948 in CLS with thesis title: Screening for genetic mutations of LDLR gene polymorphisms in hypercholesterolemia patients in Kingdom of Saudi Arabia. 2012-2013.
- I was external examiner for the student: Norah Mohammed Alyahya; Student No: 429204278 in College of Nursing with thesis title: Effect of Psycho education intervention in improving insight & medication compliance of Schizophrenic Clients. 2013.
- I was external examiner for the student: Zeinab Ahmed As-safar; Student No: 431203250 in College of Nursing with thesis title: Impact of Sickle cell disease on Saudi paediatric patients' quality of life in KSA, at Eastern province. 2014.
- I am supervisors for 4 master students in CLS stat 2020 (Niaf alsharah, Khalid Almutary, Ali Alharbi and Qied Alkarbi).

# Academic education and teaching:

- 232 CLS (Clinical Biochemistry I)
- 262 CHS (Biochemistry nutrition for Nursing)
- 452 CLS (Independent Study)
- 453 CLS (Medical Genetics)
- 432 CLS (Clinical Practice of Biochemistry)
- 595 CLS Graduate MSc (Scientific Writing)

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- 532 CHS Medical Genetics for MSc
  - 600 CLS Research for MSc
  - 591 CLS Nadoah for MSc
  - 596 CLS Research for MSc

## **Conferences:**

**1.** International Symposium on Hospital Acquired Infections (May 1997) in King Fahad National Guard Hospital in Riyadh, SA.

**2.** The First Gulf Symposium on Genetic Disorders (November 1997) in College of Medicine, King Saud University in Riyadh, SA.

3. The Third Saudi School on Human Molecular Genetics (27 November-4 December 1997) in College of Medicine, King Saud University in Riyadh, SA.

4. Pathology Update on Laboratory Medicine (2-5 November 1997), Armed Forces Hospital in Riyadh, SA.

5. Cancer Susceptibility Screening UICC (International Union Against Cancer) (May 15-21, 1998) held in Research Centre in King Faisal Specialist Hospital and Research Center, Riyadh, SA.

6. The Third Annual course organized by HUGO, Mutation Detection Training Course from 30th August to 3rd September 2002. Montpellier, France.

7. Ninth HUGO, Human Genome meeting, HGM2004 (4th-7th April 2004) in Berlin, Germany.

8. Fourth Scientific meeting (Satellite meeting), Human Genome Variation Society (HGVS) (April 2004), Berlin, Germany.

9. The Nine Saudi School on Human Molecular Genetics (17-20 September 2004) in College of Medicine, King Saud University in Riyadh, SA.

10. Biosciences 2005 from gene to system (17-21 July 2005) in Glasgow, Scotland.

11. HGM2006, the 11th International conference of HUGO meeting (31 May- 4 June 2006) in Finland.

12. BioSciences2006 23-27 July 2006, SECC, Glasgow, UK.

13. Life Sciences 2007 8-12 July 2007, SECC, Glasgow, UK.

14. 7th Human Genome Organization (HUGO) Pacific Meeting & 8th Asia-Pacific Conference on Human Genetics on April 2-5, 2008, Cebu, Philippines.

15. Pathology update 2008, International Symposium on Laboratory Medicine, 9-12 March 2008 in Riyadh Military Hospital, Riyadh, Saudi Arabia.

16. The 2nd International Conference of the Arab Society for Medical Research, 11-13 November, 2008, Cairo, Egypt.

**17.** The 2nd International Conference for Physicians and Allied Health Professions, 7-8 April 2010, Alexandria, Egypt.



18. The 3rd annual King Fahad cardiac centre international conference, college of medicine, KSU, May, 2009, Riyadh.

19. Molecular biology techniques, King Khalid University, Abha, from 20-22 April 2009.

20. 1st international conference and workshop on childhood obesity: Research and Prevention at college of Medicine in KSU 2009, Riyadh.

21. First clinical laboratory sciences forum: Technology and professional development at college of medicine in KSU, 2009, Riyadh.

22. Genetic and Hearing loss symposium by Hearing Disability research chair, KSU 2009, Riyadh.

23. (Quality development in High education) by quality deanship at KSU, 2009, Riyadh.

24. 2nd Faculty enhancement workshop at college of medicine, March 2010, KSU, Riyadh.

25. Future views to interdisciplinary postgraduate studies in the health colleges at KSU, September 2010, Riyadh.

26. The 2nd academic forum of nursing colleges in Saudi Arabia by College of Nursing in AlAhsa, April 2011, AlAhsa.

27. 4th International Conference on Fixed Combination in the Treatment of Hypertension, Dyslipidemia and Diabetes Mellitus , which took place in Paris, France from December 1-4, 2011.

28. Khalid K. Alharbi attended five days of the teaching and assessment course, University of Dundee, Scotland, UK, 3rd-8th July 2011.

29. Khalid K. Alharbi. Attended the Human Genome Meeting. Sydney, Australia. 11th-14th March 2012.

**30.** Khalid K. Alharbi. Participated in the educational activity entitled "Infectious Disease Review", St. Peterburg, Florida, USA, and 10th-17th November 2012.

31. Khalid K. Alharbi, poster presentation with title: Codon 54 in the fatty acid-binding protein -2 (A54T) polymorphism studies in type 2 diabetes mellitus in Saudi population, at 2nd International conference and exhibit on Obesity and Weight management, Omics group conferences, Atlanta, USA, 2nd-4th December 2013.

32. Khalid K. Alharbi<sup>\*</sup>, Poster abstract with title : Insertion/Deletion polymorphisms do play any role in G6PD deficiency individuals in the Kingdom of Saudi Arabia, at HGM conference, The Sands Expo and convention centre, Marina Bay Sands, Sangabour, 13th-18th April 2013. (Poster no 1126).

**33.** More than **35** conferences attended and chairperson from **2013-2020** in Saudi Arabia and all over the word.



# **PUBLICATIONS:**

**1. Khalid K. Alharbi** and Alastair Cumming **(2001)**. Apolipoprotein E and Low-density lipoprotein receptor related protein polymorphisms: association with Colorectal Cancer risk. Poster abstract in Minneapolis, Minnesota, USA, *The Journal of the Association of Genetic Technologists (AGT)*. **27(3):112. 2001, 68**.

2. Khalid K. Alharbi (2001). The association between colorectal cancer and lipid metabolism. *Asian Pacific Journal of Allergy and Immunology*. (Abstract) **19: 155-161. 2001**. The paper presented at the 4<sup>th</sup> meeting of the association of Saudi Medical Technologists, Hammersmith Hospital Imperial College School of Medicine, and London.

**3.** Poster abstract in postgraduate conference **2002** in Southampton General Hospital in University of Southampton. Poster **2002**, **3**.

**4.** Presentation and abstract in postgraduate conference **2003** in Southampton general Hospital in University of Southampton, title: Development of an approach to scan a population for unknown mutations in the MC4R gene in relation to obesity. Speaker abstract **2003**, **5**.

**5.** Two posters with abstracts in Faculty Postgraduate Conference **2004** in Biomedical Sciences in University of Southampton. Posters **2004, BH2& BH3** 

**6.** Abstract for HUGO conference (HGM2004) in Berlin, Germany April **2004**. Speaker workshop abstract **2004**, **100**.

**7.** Two Abstract for HUGO conference (HGM2004) in Berlin, Germany April **2004**. Poster **341, 360** 

**8.** Abstract for *European Human Genetics* Conference **2004** in Munich, Germany. INM Day, L Haddad, **Khalid K Alharbi**, S Ye, D.A Lawlor et al. *European Journal of Human Genetics*, **12 (supplement 1). 2004, P1000**.

9. Presentation and abstract in Human Genome Variation Society, Scientific meeting,2004 in Berlin, Germany. Speaker Abstracts 2004, 5 & 16.

**10.** Abstract for *Atherosclerosis* conference in Seville, Spain **2004**.

**Khalid K Alharbi**, L Haddad, S Ye, D A Lawlor, R A Whittall, E Spanakis, X Chen, H Rassoulian, I Simpson, D I W Phillips, C Cooper, G DaveySmith, S E Humphries, S Ebrahim, IN M Day. Mutation Scanning of *LDLR* in the Whole Population. *Atherosclerosis Supplements*, **Vol 5 No. 1, 2004, P80, W14.345.** 

**11. Khalid K. Alharbi** and Ian N. Day. High throughput mutation scanning for MC4R in meltMADGE. Biosciences2005, from gene to system in Glasgow, Scotland July 2005. *Biosciences 2005 Speaker* **No. 0192** *and poster abstract* **No. 0497** 

**12. Khalid K. Alharbi** and Ian N. Day. High throughput mutation scanning for LDLR in meltMADGE. Biosciences2005, from gene to system in Glasgow, Scotland July 2005. *Biosciences 2005 Poster abstract* **No. 0457** 

**13. Khalid Alharbi**, Santiago Rodriguez, Shuwen Huang, Ian N Day, Tom R Gaunt. Online Encyclopedia for Genetic Epidemiology studies (OEGE). HGM2006 in Finland 31May -3 June 2006. The 11<sup>th</sup> HUGO meeting Poster abstract **No. 021** 



**14. Khalid K. Alharbi**. Mutation scanning for MC4R gene in Saudi Arabia. BioSciences2006 23-27 July 2006, SECC, Glasgow, UK. Poster abstract **No. 0477.** 

Shuwen Huang, Xiao-he Chen, Junlong Zhang, Philip Guthrie, Mohammad R. 15. Abdollahi, Khalid К. Alharbi, Mohammed Aldahmesh, Matthew J. Smith, Santiago Rodriguez, George Davey Smith, Chris Byrne, Tom R. Gaunt, and Ian Day. 2006. gel electrophoresis N.M. Microplate array diagonal (MADGE) for high throughput quality control and for economical transcriptional profiling. MipTec – The 10th Leading European Drug Discovery Event. Basel (Switzerland), May 8-11, 2006.

**16.** Khalid K. Alharbi. Anthropometric measurements of obesity and MC4R gene mutation screening in Saudi Arabia. LifeScinces2007, 8-12 July 2007, SECC, Glasgow, UK. Poster abstract no. PC8.

Abstract in 1<sup>st</sup> International conference on children and adolescent obesity. Gene and obesity in Saudi Arabia by Khalid Alharbi, Journal of Pediatrcic obesity. Supplenet 3, 2009.

**18.** Khalid K. Alharbi, Poster abstract with title: A strategic Development plan for the improvement of teaching and learning at the college of Nursing, King Saud University, at Harvard Macy Institute, 2011 Program for Education in the healthcare professions, May
 **2011 at Harvard Medical School, Boston, USA.**

#### **Books:**

**19.** <u>Book Chapter (9)</u>. I.N.M. Day, M.A.Al-Dahmesh, L. Haddad<sup>1</sup>, <u>K.K. Alharbi</u>, X.Chen, H. Rassoulian<sup>2</sup>, S.E. Humphries<sup>3</sup>, E. Spanakis<sup>4</sup>, D. Eccles. MeltMADGE: economical very high throughput mutation scanning using thermal ramp electrophoresis in conjunction with MADGE (microplate array) gels. *In guide to mutation detection. Wiley Publishers*. 2005. pp 85-99. ISBN: 0471234443

**20.** <u>Book Chapter (8)</u>. Day INM, Al-Dahmesh MA, <u>Alharbi KK</u>, Chen X, Ganderton RH, Gaunt TR, Hinks LJ, O`Dell SD, Spanakis E (**2003**). Electrophoresis in microplate formats. In: She ye, Ian N.M.Day, editors. Microarrays and microplates: Applications in Biomedical Sciences. *BIOS Scientific Publishers, Oxford*, **2003. pp 145-169. ISBN: 185996074X.** 

**21.** <u>Book Chapter (6)</u>. Matt Smith, <u>Khalid K. Alharbi</u>, Mohammed A. Aldahmesh, Gabriella Pante-de-sousa, Guangwei Hou, Xiao-he Chen, Keith R. Fox, Ian N. M. Day. MADGE-based technologies for identification of unknown mutations at the population level. *In Genetic Variance Detection: technologies for pharmacolgenomics (ed Karl Hecker).* **DNA Press, LLC, 2006. pp 145-162. ISBN: 097476550.** 

#### Papers:

**22.** \*Ian N M Day, \*Khalid K. Alharbi, Matt Smith, Mohammed Al Dahmesh, Bea Zhang, Andrew Lotery, Nick C P Cross, ShuYe, Diana Eccles, <sup>1</sup>Keith Fox, Santi Rodriguez. Paucimorphic Alleles *versus* Polymorphic Alleles and Rare Mutations in Disease Causation: Theory, Observation and Detection. *Current Genomics*. **2004**, **5** (5), 431-438. \*Equal contributorships.



**23.** Khalid K. Alharbi<sup>1</sup>, Spanakis 1E, Karen Tan 3, Smith MJ, M. A. Aldahmesh O'Dell 1S D, Sayer AA, Lawlor DA, Ebrahim S, Smith GD, O'Rahilly S, Farooqi S, Cyrus Cooper 2, Phillips DI, I N M Day1. Prevalence and functionality of paucimorphic and private MC4R mutations in a large, unselected European British population, Scanned by meltMADGE. *Human Mutation*, 2007, 28(3):294-302. PMID: 17072869

**24. Khalid K Alharbi**<sup>1</sup>, Mohammed A. Aldahmesh, 1E Spanakis, 2L Haddad, 2R A Whittall, 1X Chen, 6H Rassoulian, Matt J. Smith, Julie Sillibourne, Nicola J. Ball, Nikki J. Graham, Patricia Briggs, Iain A. Simpson, 3D I W Phillips, 4D A Lawlor, 1S Ye, 2S E Humphries, 3C Cooper, 4G Davey Smith, 4S Ebrahim, Diana M. Eccles, 1I N M Day. Mutation scanning by meltMADGE: validations using *BRCA1* and *LDLR*, and demonstration of the potential to identify severe, moderate, silent, rare and paucimorphic mutations in the general population. *Genome Research*, (2005). 15 (5): 967-977, PMID: 15998910.

**25.** Matt Smith, Gabrilla Pante-de-Sousa, **Khalid K Alharbi**, Xiao-he Chen, Ian N. M. Day, Keith R. Fox. Combination of His-tagged T4 endonuclease VII with MADGE or capillary electrophoresis for economical high throughput mutation scanning. *Clinical Chemistry*, (2005). 51 (6): 1043-1046, PMID: 15914792.

**26.** Santiago Rodrguez, Tom R. Gaunt, Shuwen Huang, Mohammad R. Abdollahi, **Khalid K. Alharbi**, Xiao-he Chen and Ian N. M. Day. Genomic applications of Microplate-Array Diagonal-Gel Electrophoresis (MADGE): Approaches for SNPs, microsatellites, RNA expression and unknown mutations. *BIOforum Europe*. **01/2005, pp 42-43, GIT VERLAG GmbH& CO. KG, Darmstadt, Germany**, *www. Gitverlag.com/go/bioint*. Republished in **BIOforum Europe Highlights** issue for 2006, **01/2006, pp 52-53**.

**27.** Tamimi W, Al-Kharji NH, Alanazi M, Felimban N, Al-Khulif A, **Alharbi KK**. Cerebrospinal creatinine kinase level in children with meningitis. *Clin Biochem*. **2008 Aug**; **41(12):1025-7. Epub 2008 May 10. PMID: 18501707** 

28. Khalid K. Alharbi. Huntington's disease. *The New Egyptian Journal of Medicine*.2008 July; 39:1.

**29.** MeltMADGE for mutation scanning of specific genes in population studies **Khalid K Alharbi**, Mohammed A Aldahmesh, Tom R Gaunt, Hamid Rassoulian, Philip Al Guthrie, Santiago Rodriguez, Christopher R Boustred ,Emmanuel Spanakis &Ian N M Day *Nature Protocols.* **2010; 5(11):1800-12. PMID:21030955** 

**30.** Analysis of potential genomic confounding in genetic association studies and an online Genomic Confounding Browser (GCB ). Christopher A. Raistrick, **Khalid K. Alharbi**, Ian N.M. Day, Tom R .Gaunt .*Annals of Human Genetics, 2011 Nov;75(6):723-31.* PMID: 21972962.

**31.** Population mutation scanning of human GHR by meltMADGE and identification of a paucimorphic variant. **Khalid K. Alharbi**\*, Guangwei Hou2\*, Xiao-he Chen3, Tom R Gaunt4, Holly E Syddall5, Avan Aihie Sayer5, Elaine M Dennison5, David I W Phillips5, Cyrus Cooper5, Ian N M Day4. *Genet Test Mol Biomarkers.* **2011** *June* **20**; **15**(12):855-60. PMID: **21689014**.



**32.** Muslim M AlSaadi, Tom R Gaunt, Christopher R Boustred, Philip Al Guthrie, Xuan Liu, Luca Lenzi, Lucille Rainbow, Neil Hall, **Alharbi KK**, and Ian NM Day. From a single whole exome read to notions of clinical screening: primary ciliary dyskinesia and *RSPH9* p.Lys268del in the Arabian Peninsula. **Ann Hum Genet. May 2012; 76(3): 211–220.PMID: 22384920.** 

**33.** Alharbi KK, Imran Ali Khan & Rabbani Syed. Thrombophilic gene polymorphism studies in G6PD deficient individuals from Saudi population. **Bioinformation 8(25): 1255-1259 Dec (2012).PMID:23275730.** 

**34. Alharbi KK**, Alaa Salem Abed, Rabbani Syed, Imran Ali khan & Sabeena Muhammed Mustafa. Analysis of G6PD enzyme deficiency in Saudi population. **Bioinformation 8(25): 1260-1264 Dec (2012). PMID: 23275731.** 

**35.** Alharbi KK, Imran Ali Khan, Alaa Salem A Abed & Rabbani Syed. Insertion/Deletion polymorphisms do play any role in G6PD deficiency individuals in the Kingdom of the Saudi Arabia. Bioinformation 9(1): 049-053 Jan (2013). PMID: 23390344.

**36.** Rodriguez S, Al-Ghamdi OA, Burrows K, Guthrie PA, Lane JA, Davis M, Marsden G, **Alharbi KK**, Cox A, Hamdy FC, Neal DE, Donovan JL, Day IN.Very low PSA concentrations and deletions of the KLK3 gene. **Clin Chem. Jan 2013; 59(1):234-44. PMID: 23169475.** 

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