C. V. Of Dr. SHABANA

Name: SHABANA

Father's Name: MUHAMMAD IRFAN

Designation: Assistant Professor

Email: shabana.mmg@pu.edu.pk

Cell number: 0332-4327547

URL: http://pu.edu.pk/faculty/description/1495/Dr-shabana.html Address: Department of Microbiology and Molecular Genetics,

University of the Punjab, Lahore, Pakistan, 54590.

D.O.B: 26-06-1985

Religion: Islam Nationality: Pakistani

Marital status: Married (two children)

Educational Background

| Degree | Session | Grade/ CGPA/ Div | Subjects | Institution |
|--------|-----------|------------------------|--|---|
| PhD | 2016 | - | Specialization: Human Genetics | University of The Punjab |
| MPhil | 2008-2010 | A | Microbiology and Molecular Genetics | University of The Punjab |
| MSc | 2005-2007 | A | Microbiology and Molecular Genetics | University of The Punjab |
| BSc | 2003-2005 | 1 st div | Botany, Zoology, Chemistry | Garrison college (University of The Punjab) |
| FSc | 2001-2003 | A | Pre-Medical | Garrison college (Federal Board) |
| Matric | 1999-2001 | A^{+} | Science | Lahore board |

Distinctions

- 1st position in MPhil in Microbiology and Molecular Genetics, University of the Punjab.
- 1st position in MSc in Microbiology and Molecular Genetics, University of the Punjab.
- 1st position in BSc in Garrison Post Graduate College for Women, Lahore Cantt.
- 3rd position in FSc in Garrison Post Graduate College for Women, Lahore Cantt.
- Highest marks in the region in Matric.

Scholarships

- HEC- International Research Support Initiative Program (IRSIP) Scholarship for University College London, London, UK (Nov 2013-May 2014).
- HEC Indigenous Scholarship for PhD research (2012-2014).
- DPCC merit based scholarship in MPhil research work (2009-2010).
- University merit scholarship in the MPhil course work (2008-2009).
- HEC 2 year talent based scholarship in MSc (2005-2007).
- Fauji Foundation scholarship from Matric to BSc.

Work experience

- **Assistant Professor**, Department of Microbiology and Molecular Genetics, University of the Punjab (25-05-2016 to date).
- **Lecturer** (**BPS-18**), Department of Microbiology and Molecular Genetics, University of the Punjab (08-03-2013 to 24-05-2016).
- **Assistant teacher**, Department of Microbiology and Molecular Genetics, University of the Punjab (Sep 2009- Feb 2013).
- **Research scholar**, Department of Microbiology and Molecular Genetics, University of the Punjab (Oct 2010-Feb 2012).

Administrative responsibilities

- Departmental Publications' data maintenance
- Member Departmental Tour committee
- Member MS-MPhil admission committee
- Member BS admission committee
- Member MSc admission committee
- Departmental furniture maintenance during summer vacations
- Member, Departmental committee for Extracurricular activities (Quiz and Poetry competition, Debates, Sports)
- Member, Departmental security committee
- Performed duty on University Book Fair March 28th-31st, 2013.
- Departmental Fire Warden (from Female Faculty members)

Teaching courses

MSc:

- o Cell Biology (T+P) (every Sep-Feb semester since 2014)
- Molecular Biology (T+P) (every Feb-July semester since 2016)
- o Human Genetics (Sep2009-Feb 2010)
- Human Genetics and Gene Expression (T+P) (every Sep-Feb semester since 2016)
- o Recombinant DNA Technology (P) (Feb-July 2011)
- o Recombinant DNA Technology (T+P) (March-July 2013)
- o Gene Therapy (T) (Feb-July 2018)

BS (hons):

- Microbial Physiology (Mar-July 2010)
- o Microbial Genetics (Sep 2010-Feb 2011)
- o Microbial Diversity (P) (Sep 2011-Feb 2012)
- O Human Genetics (P) (Sep2012-Feb 2013)
- Microbial Physiology (T+P) (Sep-Feb 2014)

- Microbial Diversity (T+P) (Feb-July 2015)
- o Biodiversity of Plants and Fungi (T+P) (Feb-July semester since 2016)

MS/MPhil:

- o DNA Replication and Repair (T+P) (Sep 2016-Feb 2017)
- o Islam and Genetics (T) (Feb-July 2018)

PhD:

- o Hybridization lab technique
- Problem Solving Molecular Biology

Research area: Human Genetics

MPhil Thesis title: Effect of FTO polymorphisms on familial obesity in local population

PhD Thesis title: Genetic Characterization of Obesity in the Pakistani population

Projects:

Awarded

- 1. 2017-18: Analysis of rs5918 polymorphism in Integrin beta 3 (ITGB3) gene and serum biochemical traits with the risk of coronary artery disease in the Pakistani subjects. (2017-2018). Worth Rs 150,000/- by University of the Punjab, Lahore (On-going)
- 2. 2015-16: The C1431T polymorphism of Peroxisome Proliferator activated receptor γ (PPAR γ) is associated with low risk of diabetes in a Pakistani cohort. University of the Punjab, Lahore of worth Rs. 125,000/- (Completed)
- 3. 2014-15: Effect of Selected Mutations of Peroxisome proliferator-activated receptor gamma (PPARG) genes on diabetes in patients from Pakistan. University of the Punjab, Lahore of worth Rs. 125,000/- (Completed)
- 4. 2013-14: Molecular and genetic characterization of obesity in families of Lahore. University of the Punjab, Lahore of worth Rs 125,000/- (Completed)

5. Award of Research grant worth 386,000/- PKR in 2013-2015 by University of the Punjab.

Research supervision

- Supervised an Internee from COMSATS, Lahore, July, 08-August 08, 2013.
- Students supervised (MSc/BS): 17 (Completed) + 2 (In Progress)
- Students supervised (MS/MPhil): 7 (Completed) + 1 (In Progress)

| Year | Student | Thesis Title | | |
|------|------------------|---|--|--|
| | (Programme) | | | |
| 2013 | Amir Mumtaz | Association of leptin gene polymorphism (G2548) and leptin | | |
| - | (BS) | receptor gene mutation (Q223R) on obesity in local | | |
| 2014 | | population | | |
| | Sara Qureshi | Effect of fto polymorphosim rs9939609 on obesity in local | | |
| | (MSc) | population | | |
| 2014 | Sumbal | The effect of peroxisome proliferator activated receptor γ | | |
| - | Sarwar (BS) | (PPAR γ) gene single nucleotide polymorphism Pro115Gln on | | |
| 2015 | | diabetes in a case control study of diabetes in Pakistani subjects | | |
| | Maliha Mufti | Association of peroxisome proliferator activated receptor γ | | |
| | (MSc) | (PPARγ) gene variant C478T with diabetes in the local | | |
| | | population | | |
| | Khushbakht | A case control study of the effect of peroxisome proliferator | | |
| | Rizwan | activated receptor γ (PPAR γ) gene Pro12Ala polymorphism | | |
| | (MPhil) | on serum lipid chemistry in diabetes in the local population | | |
| | Syeda Zainab | Optimization of tetra-ARMS PCR, an efficient genotyping | | |
| | Ilyas (BS | technique, to find out prevalence and association of C161T | | |
| | hons) | variant of peroxisome proliferator activated receptor γ (PPAR | | |
| | II D " | γ) gene with diabetes in subjects from Punjab, Pakistan. | | |
| | Huma Butt | Mutational analysis of C1431T in peroxisome proliferator | | |
| | (MSc) | activated receptor γ (PPAR γ) gene and its relation with serum traits in Pakistani diabetic cases and non diabetic controls. | | |
| | Farah Ehsan | Prevalence of Gly482Ser missense mutation of peroxisome | | |
| | (MSc) | proliferator activated receptor γ (PPAR γ) gene and its | | |
| | (MBC) | association with diabetes in the local population. | | |
| 2015 | Anam Ijaz (BS) | * * | | |
| - | J (= 3) | The Role and Impact of Allelic variants of Gly972Arg | | |
| 2016 | | Polymorphism in Insulin Receptor Substrate -1 (IRS-1) Gene | | |
| | Cono Dob | on diabetes in subjects of Punjabi origin'. | | |
| | Sana Babar (MSc) | Analysis of G107D polymorphism of Insulin Receptor Substrate -2 (IRS-2) Gene on diabetes in subjects from Punjab, Pakistan | | |
| | Shafeeqa | The effect of transcription factor 7 like 2 (<i>TCF7L2</i>) gene | | |
| | Shareequ | The effect of transcription factor / fixe 2 (TCF/L2) gene | | |

| | Shahzadi (MPhil) | polymorphisms rs7903146 and rs12255372 on diabetes in the subjects from Punjab, Pakistan |
|---|------------------------------------|---|
| | Faiza Aziz (MS) | In vivo antioxidant activity of Aloe vera and Trigonella foenum-graecum in streptozotocin induced diabetic rats |
| 2016 Sana Ashiq (MS) 2017 Fizah Khalid (MSc) | | In silico and in vitro analysis of Paraoxonase 1 (PON1) gene polymorphism (rs662) in coronary artery disease in the local population Association of rs5918 polymorphism in ITGB3 gene with the risk of coronary artery disease in Pakistani subjects |
| | Istabsar ul Saadat (BS hons) | Effect of ALDH2 rs671 polymorphism on coronary artery disease and in silico study of ALDH2 gene |
| | Kahkashan Khan (BS hons) | In silico analysis of Adiponectin (ADIPOQ) gene, its SNPs and their association with Coronory Artery Disease |
| | Sumbal Sarwar (MS) | Relationship of VNTRs and T941G polymorphism in <i>MAO-A</i> gene in persons with aggressive behavior |
| | Farzeen Zahra (BS) | Optimization of DNA isolation protocol from low quantity of blood for Forensic Analysis |
| | Fasiha Khan (BS) | Optimization of DNA isolation protocol from Saliva for Forensic analysis |
| 2017 - 2018 | Zainab Liaqat (BS hons) | Effect of mutation 5382insC <i>in BRCA2</i> gene on breast cancer in local patients |
| | Faiqa Maqsood (BS hons) | Prevalence of 1294Del40 variant in <i>BRCA1</i> gene in breast cancer |
| | Tehmeena Akhtar (MSc) | Analysis of E1250X frameshift mutation of exon 11 of <i>BRCA1</i> gene in local breast cancer patients |
| | Anam Ijaz (MS) | Association of rs1800795 polymorphism in <i>IL-6</i> gene with the risk of coronary artery disease |
| | Muhammad Farhan Nasir (MS) | Analysis of 2157delG variant in BRCA1 gene in breast cancer in the local population |
| 2018 | Mahrukh Jamil (BS) | In Progress |
| 2019 | Amina Tahir (MSc) | In Progress |
| | Farah Ehsan (MPhil) | In Progress |

Research Publications (IF: 58.319):

2018 (IF: 18.01):

- 1. **Shabana.**, Ashiq, S., Ijaz, A., Khalid, F., Saadat, I., Khan, K., Sarwar, S., Shahid, S.U. Genetic Risk Score (GRS) constructed from polymorphisms in the *PON1*, *IL-6*, *ITGB3*, and *ALDH2* genes is associated with the risk of coronary artery disease in Pakistani subjects. *Lipids in Health and Disease*. 17 (224): 1-7. **IF: 2.663**
- 2. Shahzadi, S., **Shabana**., Sarwar, S., Shahid, S.U. Genome wide implicated risk variants of *TCF7L2* gene contribute to type 2 diabetes susceptibility by modulating serum lipids in Pakistani population. *International Journal of Diabetes in Developing Countries*. In press. **IF: 0.361**
- 3. **Shabana.**, Shahid, S. U., Hasnain, S. Use of a gene score of multiple low-modest effect size variants can predict the risk of obesity better than the individual SNPs. *Lipids in Health and Disease*. 17(155): 1-9. **IF**: **2.663**
- 4. **Shabana.**, Shahid, S. U., Hasnain, S. Association of Anthropometric and metabolic indices in obese Pakistani Subjects. *Pakistan Journal of Zoology*. 50(6): 1-4. **IF: 0.547**
- 5. **Shabana.**, Shahid, S. U., Hasnain, S. Identification of genetic basis of obesity and mechanistic link of genes and lipids in Pakistani population. *Bioscience Reports*. 38(4): 1-9. **IF: 2.899**
- 6. Khushbakht., Sarwar, S., **Shabana.** The protective effect of the Pro12Ala polymorphism of Peroxisome Proliferator activated receptor γ (PPARγ) isoform 2 in progression to diabetes in a Pakistani cohort. *International Journal of Diabetes in Developing Countries*. 38(2): 238–242. **IF: 0.361**
- 7. **Shabana**, Shahid, S. U., Irfan, U. The gut microbiota and its potential role in Obesity. *Future Microbiology*. 13(5):589-603. **IF: 3.19**
- 8. Shahid, S. U., **Shabana.**, Rehman, A., Humphries, S. E. GWAS implicated risk variants in different genes contribute additively to increase the risk of coronary artery disease (CAD) in the Pakistani subjects. *Lipids in Health and Disease*. 17(89): 1-7. **IF**: **2.663**

9. Shahid, S. U., **Shabana**, Humphries, S. E. The SNP rs10911021 is associated with oxidative stress in coronary heart disease patients from Pakistan. *Lipids in Health and Disease*. 2018(17):1-6. **IF**: **2.663**

2017 (IF: 12.94):

- 10. **Shabana.**, Ehsan, F., Hasnain, S. Association of Gly482Ser Varient of PPARGC1α Gene with Diabetes in Pakistani Population. *Pakistan Journal of Zoology*. 49(5): 1-4. **IF: 0.547**
- 11. Shahid, S. U., **Shabana.**, Rehman, A. Association patterns of Endothelial Nitric Oxide Synthase Gene (*NOS3*) variant Glu298Asp with blood pressure and serum lipid levels in Subjects with Coronary Artery Disease from Pakistan. *Annals of Human Genetics*. 81:129-131: **IF: 1.529**
- 12. Shahid, S. U., **Shabana.**, Cooper, J., Rehman, A., Humphries, S. E. Common variants in the genes of triglyceride and HDL-C metabolism lack association with coronary artery disease in the Pakistani subjects. *Lipids in Health and Disease*. (2017) 16:24. **IF**: **2.663**
- 13. Shahid, S. U., Shabana., Cooper, J., Beaney, K. E., Li, K., Rehman, A., Humphries, S. E. Genetic risk analysis of coronary artery disease in the Pakistani subjects using a genetic risk score of 21 variants. Atherosclerosis. 258(2017):1-7.
 IF: 4.467
- 14. Qureshi, S. A., Mumtaz, M., Shahid, S. U., **Shabana**. rs3751812, a common variant in fat mass and obesity-associated (FTO) gene, is associated with serum high- and low-density lipoprotein cholesterol in Pakistani individuals. *Nutrition* 39: 92-95.. **IF: 3.734**

2016 (20.077):

15. Butt, H., **Shabana.**, Hasnain, S. The C1431T polymorphism of peroxisome proliferator activated receptor γ (PPARγ) is associated with low risk of diabetes in a Pakistani cohort. *Diabetology & Metabolic Syndrome*. 8:67. **IF: 2.347**

- 16. Shahzadi, S., **Shabana.**, Chaudhry, M., Arooj, I., Hasnain, S. A single nucleotide polymorphism in C12orf43 region is associated with the risk of coronary artery disease in a Pakistani cohort. *Biochemical Genetics*. 54:676–684. **IF: 1.543**
- 17. **Shabana.**, Hasnain, S. Prevalence of R236G mutation in Pakistan. *Obesity Research and Clinical Practice*. 10S: S110-116. **IF: 2.606**
- 18. **Shabana.**, Hasnain, S. Leptin promoter variant G2548A is associated with serum leptin and HDL-C levels in a case control observational study in association with obesity in a Pakistani cohort. 2016. *Journal of Biosciences*. 41(2): 251-255. **IF:** 1.422
- 19. **Shabana**, Shahid, S.U., Li, K.W., Acharya, J., Cooper, J. A., Hasnain, S., Humphries, S. E. Effect of six type 2 diabetes susceptibility loci and the an FTO variant on Obesity in Pakistani Obese subjects. *European Journal of Human Genetics*. 24(6): 903-910. **IF: 4.287**
- 20. Sarwar, S., **Shabana**. The Pro115Gln Missense Mutation Of Peroxisome Proliferator Activated Receptor γ (PPARγ) Gene In Diabetes In The Pakistani Population. *Avicenna Journal of Clinical Microbiology and Infection*. 3(2):e35148.
- 21. Shahid, S.U., **Shabana**, Cooper, J. A., Rehman, A., Humphries, S. E. *ACE* and *eNOS* polymorphisms associated with blood pressure but not with coronary heart disease in people from Punjab, Pakistan. *Pakistan Journal of Zoology*. 48(4): 1125-1132. **IF: 0.491**
- 22. Shahid, S.U., **Shabana**., Cooper, J. A., Beaney, K., Li, K., Rehman, A., Humphries, S. E. Effect of SORT1, APOB and APOE polymorphisms on LDL-C and coronary heart disease in the Pakistani subjects and their comparison with Northwick Park Heart Study II (NPHSII). *Lipids in Health and Disease*. 15(83): 1-9. **IF**: **2.073**
- 23. **Shabana.**, Hasnain, S. The p. N103K mutation of Leptin (LEP) gene and severe early onset obesity in Pakistan. *Biological Research*. 49(23): 1-5. **IF: 1.692**

- 24. **Shabana.**, Hasnain, S. Obesity, more than a 'Cosmetic' problem. Current knowledge and future Prospects of Human Obesity Genetics. *Biochemical Genetics*. 58(1): 1-28. **IF: 1.543**
- 25. Shahid S. U., **Shabana.**, Rehman, A., Hasnain, S. Role of a common variant of Fat Mass and Obesity associated (FTO) gene in obesity and coronary artery disease in subjects from Punjab, Pakistan: a case control study. *Lipids in Health and Disease* 15, (1): 1-6. **IF**: **2.073**

2015 (IF: 7.292):

- 26. **Shabana.**, Hasnain, S. Association of the leptin receptor Gln223Arg polymorphism with lipid profile in obese Pakistani subjects. *Nutrition* 31(9): 1136-1140. **IF: 2.839**
- 27. **Shabana.**, Hasnain, S. The fatty acid binding protein 2 (*FABP2*) polymorphism Ala54Thr and obesity in Pakistan: a population based study and a systematic meta-analysis. *Gene*. 574(1): 106-111. **IF: 2.319**
- 28. **Shabana.**, Hasnain, S. Effect of the common FTO (fat mass and obesity associated) gene variants on Obesity in Pakistani population: A case-control study. *BioMed Research International*. 2015: 1-8. **IF**: **2.134**

MODULES ATTENDED AT UCL, LONDON.

Have attended two study modules while staying at UCL.

- 1. MEDCG012: On cardiovascular diseases.
- 2. GENE002: On cardiovascular Genetics.

Conferences and Workshops organized

1. Organized a three day International conference on Microbiology and Molecular Genetics at the Department of Microbiology and Molecular Genetics, University of the Punjab on Feb 7-9, 2018.

- 2. Organized a one day symposium on 'Awareness on HIV/AIDS' by Punjab AIDS control program and the Department of Microbiology and Molecular Genetics, University of the Punjab on March 30, 2017.
- 3. Organized a two day hands on training workshop on 'Restriction mapping and RFLP: *In silico* and *in vitro*' at the Department of Microbiology and Molecular Genetics, University of the Punjab on February 23-24, 2017.
- 4. Organized a one day hands on training workshop on 'Basic Statistical Analysis' at the Department of Microbiology and Molecular Genetics, University of the Punjab on February 09, 2017.
- 5. Member organizing committee two day pre conference workshop on 'Parasitology and its Immunological aspects', organized by Department of Microbiology and Molecular Genetics, University of the Punjab February 13-14, 2015.
- 6. Member organizing (Poster) committee 10th Biennial International conference of Pakistan Society for Microbiology, Exploring microbes for future endeavors, organized by Department of Microbiology and Molecular Genetics, University of the Punjab March 25-28, 2015.
- 7. Member organizing committee one day event entitled 'Diversity in Microbiology: A crosstalk' organized by the Department of Microbiology and Molecular Genetics, University of the Punjab on December 17, 2015.
- 8. Member organizing committee One day Symposium on Emerging Issues of Multidrug Resistance: A Threat to the Globe at Department of Microbiology and Molecular Genetics, University of the Punjab on Oct 02, 2014.
- 9. Member organizing committee Bio-physicochemical basis for technopreneurship' at Department of Microbiology and Molecular Genetics, University of the Punjab, on 2nd-03rd April, 2013.

Conferences and Workshops Attended

- 1. Attended a one day workshop on 'Right Tools for Bacterial Identification' at the Department of Microbiology and Molecular Genetics, University of the Punjab on Feb 01, 2018.
- 2. Attended two days Bioinformatic workshop on Analysis and Annotation of Variants in NGS data organized by Department of Bioinformatics and Computational Biology, Virtual University of Pakistan, January 03-04, 2017.

- 3. Attended One Day Workshop On 'Dual Use Research of Concern' jointly organized by the Department of Microbiology and Molecular Genetics, University of the Punjab and The Health Security Partners on 18th July, 2016.
- 4. Attended two day training workshop on '2D and 3D Cell Culture' organized by the Department of Microbiology and Molecular Genetics, University of the Punjab on February 9-10, 2016.
- 5. Attended one day training workshop on ENDNOTE organized by the Department of Microbiology and Molecular Genetics, University of the Punjab on January 12, 2016.
- 6. Attended one day event entitled 'Diversity in Microbiology: A crosstalk' organized by the Department of Microbiology and Molecular Genetics, University of the Punjab on December 17, 2015.
- 7. Attended two days pre-conference workshop on 'Parasitology and its immunological aspects' at Department of Microbiology and Molecular Genetics, University of the Punjab on Feb, 13th-14th, 2015.
- 8. Attended One day Symposium on Emerging Issues of Multidrug Resistance: A Threat to the Globe at Department of Microbiology and Molecular Genetics, University of the Punjab on Oct, 02, 2014.
- 9. Attended National Training workshop on 'Advanced Technologies in Gene Expression Analysis' at National Institute for Biotechnology and Genetic Engineering, Faisalabad from 23rd-27th September, 2013.
- 10. Attended Hands on training workshop on 'Basic Biosafety Measures in Research' at Department of Microbiology and Molecular Genetics, University of the Punjab, on 27th September, 2013.
- 11. Attended Faculty Orientation Program from 2nd-5th July, 2013 organized by Institute of Administrative Sciences, University of the Punjab.
- 12. Attended 2nd In-Service Faculty Trainig Program from 4th-8th February, 2013 at Department of Microbiology and Molecular Genetics, University of the Punjab.
- 13. Attended 14th National Conference of Hematology from 23rd-25th February, 2012 at Shaikh Zayed Medical, Lahore.
- 14. Attended 12th National Hematology Conference; Heamcon 2010, Evidence based hematology' at Pearl Continental Hotel, Lahore.

Conferences and Workshops Attended and Presented

- 1. Oral presentation in the three day International conference on Microbiology and Molecular Genetics at the Department of Microbiology and Molecular Genetics, University of the Punjab on Feb 7-9, 2018.
- 2. Poster presentation in 28th Annual International Conference on Family Medicine at Pearl Continental Hotel, Lahore on 12-14 January, 2018.
- 3. Oral presentation in 1st International Conference on Future Medicine organized by the Sargodha Medical College at University of Sargodha, Sargodha on 5-7 January, 2018.
- 4. Attended and presented orally in the 8th National Conference on Emerging Trends in Diabetes, organized by Services Institute of Medical Sciences, Lahore on March 04, 2017.
- 5. Attended and presented orally on two day 'International Conference on Biotechnology' organized by the University of South Asia, Lahore, Pakistan from 24-25 February, 2016.
- 6. Oral Presentation entitled 'Replication of six type 2 diabetes susceptibility loci in obesity in Pakistani subjects' on One day awareness and research symposium on Diabetes, Heart Disease and Related Metabolic Disorders on November 05, 2015 at NIBGE, Faisalabad.
- 7. Poster presentation entitled 'Common FTO variants and obesity in Pakistan' at 38th Annual PAP Conference/3rd Joint Conference of the Societies of Pathology in collaboration with the Royal College of Pathologists and British Association of Pakistani Pathologists from November 06-08, 2015 at Pearl Continental Hotel, Lahore.
- 8. Oral presentation entitled 'Effect of six type 2 diabetes susceptibility loci and the *FTO* variant rs9939609 on Obesity in Pakistani Obese subjects' at 10th Biennial International conference of Pakistan Society for Microbiology, Exploring microbes for future endeavors, March 25-28, 2015.
- 9. Poster presentation entitled (Association of leptin recptor Gln223Arg polymorphism with lipid profile in obese Pakistani subjects' at 10th Biennial International conference of Pakistan Society for Microbiology, Exploring microbes for future endeavors, March 25-28, 2015.

10. Attended and presented poster in 1st Joint PAP/RCPath/AMP Conference on Molecular Pathology held from 24th-26th November, 2014 at Pearl Continental Hotel, Lahore.

11. Presented a poster on 'Effect of six type 2 diabetes susceptibility loci and an FTO gene variant on obesity in Pakistani obese subjects' in British Atherosclerosis Society autumn meeting at Queens College, Cambridge UK from Sep. 25-26, 2014.

12. Attended and presented a poster at a conference on 'Bio-physicochemical basis for technopreneurship' at Department of Microbiology and Molecular Genetics, University of the Punjab, on 2nd-03rd April, 2013

Conferences and Workshops honors

• 3rd position in poster competition in 'one day symposium on Awareness on HIV/AIDS by Punjab AIDS control program and the Department of Microbiology and Molecular Genetics, University of the Punjab on March 30, 2017.

Laboratory Skills: Phlebotomy, DNA isolation, DNA quantification, Agarose and polyacrylamide electrophoresis, Electomobility shift assay (EMSA), Microarray Titre Diagonal Gel Electrophoresis (MADGE), PCR, TaqMan/KASPer assay.

Statistical Skills: R-program, Statistical Package for Social Sciences (IBM statistics, version 22.0), Statistical tests for quantitative/continuous variables, Correlation/Regression/ANOVA/t-test/Chi-square analyses for association with a particular outcome.

Computer skills: MS office (word/power point/excel)

Reviewer of the Journals

- Molecular Biology Reports
- Biochemical Genetics
- British Journal of Medicine and Medical Research
- Journal of Geriatric Medicine and Gerontology
- International Journal of Biochemistry Research and Review
- Childhood Obesity
- Annals of Human Genetics

• Bioscience reports

References:

- Professor Dr Shahida Hasnain, HEC National Distinguished Professor, The Women University Multan.
- Professor Steve Humphries, British Heart Foundation Chair of Center of Cardiovascular Genetics at Institute of Cardiovascular Science, Department of Medicine, University College London, London, UK.