

## Faculty Resume

Name	<b>AQIB IQBAL</b>
Personal	<p>H.No 157, Street 7, Sector J-5, Phase II, Hayatabad, Peshawar</p> <p>Phone: +92-334-9086080</p> <p>E.mail.: aqib72@aup.edu.pk</p>
Experience	<ul style="list-style-type: none"> <li>▶ May 2009 to date, Assistant Professor, IBGE Agricultural University Peshawar, Khyber Pakhtunkhwa</li> <li>▶ Nov 2008-May 2009, Assistant Professor, Department of Biotechnology, Kohat University of Science and Technology. Kohat</li> <li>▶ April 2007 to Nov 2008, Assistant Professor, IBGE Agricultural University Peshawar, Khyber Pakhtunkhwa</li> <li>▶ July 1999 to March 2007, Research Officer, Agricultural Research System, Khyber Pakhtunkhwa.</li> <li>▶ October 1998 to July 1999, Field Officer, Lakson Tobacco Company Limited</li> </ul>
Honor and Awards	<ul style="list-style-type: none"> <li>▶ Infaq Scholarship from Akhtar Foundation Pakistan for my M.Sc (Hons) studies (1996-97)</li> <li>▶ UNDP and Chinese Government financial Assistance for one month training on Vegetable breeding and production technology (August-September 2000)</li> <li>▶ I was part of the MINFAL team to visit Afghanistan to assess their assistance needs and find venues of cooperation in Agriculture sector for mutual benefit of both the countries (May 2001)</li> <li>▶ Japanese Government MEXT (Monbushu) Scholarship for my Ph.D studies (October 2003- March 2007)</li> </ul>

Memberships	<p>► Japanese Society of Biotechnology, Biochemistry and Agriculture (2006-2008)</p> <p>► Japanese Society of Plant Physiology (2006-2008)</p> <p>► Euglena Association of Japan (2005-2008)</p>																																																			
Graduate Students	<p>Completed</p> <table><tr><td>Years</td><td>Degree</td><td>Name</td></tr><tr><td>2008</td><td>M.Phil</td><td>Malik Nawaz Shuja</td></tr><tr><td colspan="3">Thesis Title: Morphological and biochemical assessment of maize lines against drought stress</td></tr><tr><td>2009</td><td>M.Phil</td><td>Bilal Mohammad Khan</td></tr><tr><td colspan="3">Thesis Title: Genetic diversity analysis through RAPD primers of <i>Brassica napus</i> mutant lines with variable Oleic and Erucic acid content</td></tr><tr><td>2009</td><td>-do-</td><td>Wajid Ali</td></tr><tr><td colspan="3">Thesis Tile: Measurement of genetic distance between drought tolerant and susceptible maize genotypes using RAPD primers</td></tr><tr><td>2009</td><td>-do-</td><td>Tahir Hussain</td></tr><tr><td colspan="3">Thesis Tile: Molecular profiling of wheat genotypes varying in response to salt stress with RAPD primers</td></tr><tr><td>2009</td><td>-do-</td><td>Ihasn Ullah</td></tr><tr><td colspan="3">Thesis Title: Effect of breed, diet, pH and temperature on the protein composition of dairy milk</td></tr><tr><td>2010</td><td>-do-</td><td>Jehangir Shah</td></tr><tr><td colspan="3">Thesis Title: Biochemical assessment of grain and dough quality of wheat, rye and triticale using HMW glutenin sub-units</td></tr><tr><td>2010</td><td>-do-</td><td>Essa Ali</td></tr><tr><td colspan="3">Thesis Tile: Molecular and biochemical analysis of wheat cultivars against drought stress</td></tr><tr><td>2010</td><td>-do-</td><td>Hina Tahir</td></tr><tr><td colspan="3">Thesis Title: Determination of drought and salt stress tolerance potential of different Triticale cultivars</td></tr></table>	Years	Degree	Name	2008	M.Phil	Malik Nawaz Shuja	Thesis Title: Morphological and biochemical assessment of maize lines against drought stress			2009	M.Phil	Bilal Mohammad Khan	Thesis Title: Genetic diversity analysis through RAPD primers of <i>Brassica napus</i> mutant lines with variable Oleic and Erucic acid content			2009	-do-	Wajid Ali	Thesis Tile: Measurement of genetic distance between drought tolerant and susceptible maize genotypes using RAPD primers			2009	-do-	Tahir Hussain	Thesis Tile: Molecular profiling of wheat genotypes varying in response to salt stress with RAPD primers			2009	-do-	Ihasn Ullah	Thesis Title: Effect of breed, diet, pH and temperature on the protein composition of dairy milk			2010	-do-	Jehangir Shah	Thesis Title: Biochemical assessment of grain and dough quality of wheat, rye and triticale using HMW glutenin sub-units			2010	-do-	Essa Ali	Thesis Tile: Molecular and biochemical analysis of wheat cultivars against drought stress			2010	-do-	Hina Tahir	Thesis Title: Determination of drought and salt stress tolerance potential of different Triticale cultivars		
Years	Degree	Name																																																		
2008	M.Phil	Malik Nawaz Shuja																																																		
Thesis Title: Morphological and biochemical assessment of maize lines against drought stress																																																				
2009	M.Phil	Bilal Mohammad Khan																																																		
Thesis Title: Genetic diversity analysis through RAPD primers of <i>Brassica napus</i> mutant lines with variable Oleic and Erucic acid content																																																				
2009	-do-	Wajid Ali																																																		
Thesis Tile: Measurement of genetic distance between drought tolerant and susceptible maize genotypes using RAPD primers																																																				
2009	-do-	Tahir Hussain																																																		
Thesis Tile: Molecular profiling of wheat genotypes varying in response to salt stress with RAPD primers																																																				
2009	-do-	Ihasn Ullah																																																		
Thesis Title: Effect of breed, diet, pH and temperature on the protein composition of dairy milk																																																				
2010	-do-	Jehangir Shah																																																		
Thesis Title: Biochemical assessment of grain and dough quality of wheat, rye and triticale using HMW glutenin sub-units																																																				
2010	-do-	Essa Ali																																																		
Thesis Tile: Molecular and biochemical analysis of wheat cultivars against drought stress																																																				
2010	-do-	Hina Tahir																																																		
Thesis Title: Determination of drought and salt stress tolerance potential of different Triticale cultivars																																																				

	<p>In Progress</p> <table><tr><th>Years</th><th>Degree</th><th>Name</th></tr><tr><td>2011</td><td>M.Phil</td><td>Akram Khan</td></tr><tr><td colspan="3">Thesis Title: Attenuation of drought stress in <i>Brassica</i> seedlings with exogenous application of Ca<sup>2+</sup> and H<sub>2</sub>O<sub>2</sub> application</td></tr><tr><td>2011</td><td>-do-</td><td>Asad Bilal</td></tr><tr><td colspan="3">Thesis Tile: Selection of wheat cultivars against Salinity stress using different Molecular and biochemical indicators</td></tr><tr><td>2011</td><td>-do-</td><td>Shabeer Ahmad</td></tr><tr><td colspan="3">Thesis Title: Morphological and molecular characterization of indigenous and US ancestral Soybean germplasm</td></tr></table>	Years	Degree	Name	2011	M.Phil	Akram Khan	Thesis Title: Attenuation of drought stress in <i>Brassica</i> seedlings with exogenous application of Ca <sup>2+</sup> and H <sub>2</sub> O <sub>2</sub> application			2011	-do-	Asad Bilal	Thesis Tile: Selection of wheat cultivars against Salinity stress using different Molecular and biochemical indicators			2011	-do-	Shabeer Ahmad	Thesis Title: Morphological and molecular characterization of indigenous and US ancestral Soybean germplasm		
Years	Degree	Name																				
2011	M.Phil	Akram Khan																				
Thesis Title: Attenuation of drought stress in <i>Brassica</i> seedlings with exogenous application of Ca <sup>2+</sup> and H <sub>2</sub> O <sub>2</sub> application																						
2011	-do-	Asad Bilal																				
Thesis Tile: Selection of wheat cultivars against Salinity stress using different Molecular and biochemical indicators																						
2011	-do-	Shabeer Ahmad																				
Thesis Title: Morphological and molecular characterization of indigenous and US ancestral Soybean germplasm																						
Service Activity	<p>Teaching and Research</p> <p>Courses taught to Ph.D</p> <p>Plant Genetic Engineering</p> <p>Recent trends in Molecular Genetics</p> <p>Courses taught to M.Phil:</p> <p>Elements of Biotechnology</p> <p>Biochemistry</p> <p>Courses taught to B.Sc (Hons) Biotechnology</p> <p>Biometrical Genetics</p> <p>Cell Biology</p> <p>Introduction to Cell Signalling</p> <p>Techniques in Biotechnology</p> <p>Enzymology</p> <p>Agricultural Biotechnology</p>																					

Brief Statement of Research Interest	<ul style="list-style-type: none"> <li>• Molecular and biochemical characterization of plant species against abiotic stresses</li> <li>• Genetic evolution, diversity and regulation of different stress related proteins in different plant species</li> <li>• Development and analysis of cultural techniques to improve water use efficiency and crop production under stress conditions</li> </ul>
Publications	<p>Manuscripts published in Refereed Journals</p> <ol style="list-style-type: none"> <li>1. Khan NU, Siddiq L, Ali I, Iqbal A, Munir I, Rashid F, Ali S, Raziq F and Swati ZA (2010) Prevalence of Hepatitis B in the blood donors of NWFP and FATA regions and the current scenario of HBV infection in Pakistan. <i>African J Biotech.</i> 9: 6161-6166.</li> <li>2. Ali I, Rehman MU, Rashid F, Khan SU, Iqbal A, Liixin X, Ahmed NU, Swati ZA (2009) Cis-regulatory elements affecting the <i>Nanos</i> gene promoter in the germline stem cells. <i>J Biotech.</i> 145: 323-329.</li> <li>3. Iqbal A, Yabuta Y, Takeda T, Nakano Y and Shigeoka S (2006) Hydroperoxides reduction by thioredoxin-specific glutathione peroxidase isoenzymes of <i>Arabidopsis thaliana</i>. <i>FEBS J.</i> 273: 5589-5597.</li> </ol> <p>Manuscripts in Refereed Journals (In Press)</p> <ol style="list-style-type: none"> <li>1. Khan WM, Munir I, Ahmad M, Iqbal A, Ali I, Ahmad D, Hussain F and Swati ZA (2010). Assessment of Genetic Diversity of <i>Brassica juncea</i> Germplasm Using RAPD Markers. <i>African J. Biotech.</i> (In press).</li> <li>2. Arif M, Jan MT, Khan NU, Akbar H, Khan SA, Khan MJ, Khan A, Munir I and Iqbal A (2010) Impact of plant populations and nitrogen levels on maize. <i>Pak. J. Botany.</i> 42(6): (In press)</li> <li>3. Ali S, Munir I, Ahmad M, Iqbal A, Ali I, and Swati ZA (2010) Characterization of <i>Brassica napus</i> germplasm based on molecular markers. <i>African J Biotech.</i> (In press).</li> </ol> <p>Manuscripts published in non-refereed Journals (HEC recognized)</p> <ol style="list-style-type: none"> <li>1. Ahmad G, Quresh Z and Iqbal A (2001) Response of sunflower hybrids to different planting dates in Peshawar Valley. <i>Sarhad J Agric.</i> 17(4): 561-564.</li> <li>2. Awan AA, Ahmad G, Iqbal A and Quresh Z (2001) Effect of different scarification treatments on the seed germination and seedling height of wild olives. <i>Sarhad J Agric.</i> 17(3):</li> </ol>

373-375.

3. Ahmad G, Quresh Z, Khan SD, Iqbal A (2001) Study on the intercropping of soybeans with maize. Sarhad J Agric. 17(2): 235-238.

#### Manuscripts published in non-refereed Journals

1. Shuja MN, Nayab D, Ali M, Iqbal A and Khalil IH (2010) Evaluating the response of wheat genotypes to forage clipping. Int. J. Agri. Biol. 12(1): 111-114.
1. Awan AA, Iqbal A, JavedurRehman M and Idris G (2003) Response of hardwood olive cuttings to different growth media and basal injuries for propagation. Asian J Plant Sc. 2(12): 883-886.
2. Awan AA, Iqbal A and Idris G (2003) The germination of European type Olive seeds as affected by different sowing methods. Asian J Plant Sc. 2(12): 881-882.
3. Saleem K, Hameed AK, Iqbal A and JavedurRehman M (2002) Effect of different media on growth and quality of Gladiolus (*Gladiolus hartulanus* cv. Jacksonville Gold). Asian J Plant Sc. 1(6): 670-671
4. Iqbal I, Bakht J and Shafi M (2000) Response of Various Sorghum Genotypes to Different Salinity Levels at Early Growth Stage. Pakistan J Bio Sc. 3(9): 1406-1408.

#### Conference Proceedings

1. Iqbal A, Alam R, Ali I, Khan I, Munir I, Swati ZA. (2010). Exogenous application of  $\text{Ca}^{2+}$  and  $\text{K}^{+}$  improves water relations and protect cellular membranes and chlorophyll against the water deficit induced oxidative stress in *Brassica napus* seedlings. First National Conference on Biotechnology and Microbiology at Bara Gali. Arranged by Centre of Biotechnology and Microbiology, University of Peshawar from July 4 to 7, 2010.
2. Iqbal A (2008) Mechanism of abiotic stress tolerance in crop plants. Ist International Symposium on Biotechnology; current trends at University of Malakand. July 2-4, 2008. 24
3. Iqbal A and F Ali (2008) Oncogene identification and human genome sequencing. Ist International Symposium on Biotechnology; current trends at University of Malakand. July 2-4, 2008.
4. Iqbal A, Yabuta Y, Takeda T, Nakano Y and Shigeoka S (2007) Molecular and functional characterization of glutathione peroxidase gene family in Arabidopsis thaliana. Ist National Symposium on Biotechnology; Recent

	<p>advances at University of Malakand. May 21-24, 2007. 12</p> <ol style="list-style-type: none"> <li>Iqbal A, Tomo H, Yabuta Y, Takeda T, Nakano Y and Shigeoka S (2007) Enhanced susceptibility of <i>Arabidopsis</i> glutathione peroxidase, AtGPX3 and 6 knockout mutants to oxidative stress. Proceedings of 19<sup>th</sup> Conference of the Japanese Society of Biosciences, Biotechnology and Agrochemistry, 25-27 March 2007 Tokyo. 216</li> <li>Iqbal A, Nakanishi K, Takeda T, Nakano Y and Shigeoka S (2006) Molecular characterization of glutathione peroxidase (GPX like protein) isoenzymes of <i>Arabidopsis thaliana</i>. Proceedings of 19<sup>th</sup> Conference of the Japanese Society of Biosciences, Biotechnology and Agrochemistry, 25-27 March 2006 Kyoto. 186</li> </ol> <p>Manuscripts submitted for publications</p> <ol style="list-style-type: none"> <li>Shuja MN, Ali W, Iqbal A, Ali I, Munir I, Ahmad G, Iqbal M and Swati ZA (2010) Maize breeding for marginal lands; physiological and molecular approach to decipher response and select maize RILs under water deficit at early growth stage. African Journal of Biotechnology (under Review).</li> <li>Iqbal A, Alam R, Ali I, Munir I Swati ZA and Khan I (2010) Exogenous application of Ca<sup>2+</sup> and K<sup>+</sup> improves water relations and protect cellular membranes and chlorophyll against the water deficit induced oxidative stress in <i>Brassica napus</i> seedlings. Plant Physiology and Biochemistry (under Review).</li> <li>I Munir, S Ali, M Ahmad J Abbas, A Iqbal, I Ali and ZA Swati (2010) Biochemical characterization of local and exotic <i>Brassica napus</i> germplasm. Pak J. Bot. (Submitted).</li> <li>Munir I, El-Awady M, Iqbal A and Nakano Y (2010) Purification and Characterization of a Novel NADP<sup>+</sup>-dependent Alcohol Dehydrogenase from <i>Euglena gracilis</i> Z. Journal of Eukaryotic Microbiology (Submitted)</li> <li>Iqbal A, Ali I, Munir I, Shigeka S, Takeda T and Nakano Y (2010) Altered redox homeostasis with Glutathione peroxidase knockout (<math>\Delta gpx3</math>) mutation in <i>Arabidopsis thaliana</i> under drought stress (Manuscript)</li> <li>Iqbal A, Ali I, Munir I, Shigeka S, Takeda T and Nakano Y (2010) AtGPX3 and 6 double mutation results in increased production of ROS and enhanced damage to the <i>Arabidopsis thaliana</i> seedlings under salt stress conditions (Manuscript).</li> </ol>
--	---

Research Grants and Contracts.	<div> Date Title Agency / Organization and Total Award Amount </div> <div> Approved </div> <div> 2011 Utilizing indigenous wild species from the arid regions to genetically engineer abiotic stress tolerance in crop plants PSF/Rs. 2.86 million </div> <div> Under Review </div> <div> 2011 Production of disease resistant tomato using a broad spectrum antifungal gene (ChiC) isolated from <i>Streptomyces griseus</i> PSF/Rs. 2.81 million </div> <div> 2011 Overexpression of AP2/EREBP transcription factors to enhance cold and drought stress tolerance of tomato ALP/Rs.3.00 million </div>