

## CURRICULUM VITAE

Name : **Dr. Iqbal Munir**

Date of birth : February 3, 1969

Sex : Male

Marital status : Married

Nationality : Pakistani

Present Address : Institute of Biotechnology and Genetic Engineering, Khyber Pakhtunkhwa Agricultural University Peshawar Pakistan  
 Tele: +92-91-9221072  
 Fax : +92-91-9221072  
 Mobile:+92-3459721966  
 Email: [iqmunir@hotmail.com](mailto:iqmunir@hotmail.com)

### ACADEMIC DETAILS

<b>Institution/Board</b>	<b>Degree/Certificate</b>	<b>Session</b>	<b>CGPA /Marks</b>
Michigan State University, East Lansing, Michigan, USA	<b>Post Doctorate</b> (Biofuel/Lipid Metabolism)	2008-2009	-----
Osaka Prefecture University, Osaka, <b>Japan</b>	<b>Post Doctorate</b> (Biotechnology/Enzymology)	2003- 2004	-----
Osaka Prefecture University, Osaka, <b>Japan</b>	<b>PhD</b> (Biotechnology/Enzymology)	1999-2003	A
NWFP Agricultural University Peshawar, <b>Pakistan</b>	<b>M.Sc (Hons)</b> Plant Breeding and Genetics	1991-93	3.65/4.00 (78.5%) Division: First
NWFP Agricultural University Peshawar, <b>Pakistan</b>	<b>B.Sc (Hons)</b> Plant Breeding and Genetics	1987-91	3.86/4.00 (82.9%) Division: First
Nisar Shaheed F. G. College, Risalpur, NWFP, <b>Pakistan</b>	<b>F.Sc</b> Pre-Medical	1984-86	713/1100 (64.8%) Division: First

## EXPERIENCE (TEACHING AND RESEARCH)

Employer	Designation	Duration	Remarks
Institute of Biotechnology and Genetic Engineering, Khyber Pakhtunkhwa Agricultural University Peshawar, Pakistan	<b>Assistant Professor</b>	1.8.2004 - continued	Joined this position through proper channel from Agric.Res. Deptt.
Michigan State University, USA	<b>Visiting Research Associate (Post Doctoral Fellow)</b>	1.3.2008 – 28.2.2009	On leave from Parent University
Osaka Prefecture University, Japan	<b>Visiting Research Associate (Post Doctoral Fellow)</b>	1.4.2003 – 30.4.2004	On leave from Parent Department
Khyber Pakhtunkhwa Agriculture Research System Peshawar, Pakistan	<b>Research Officer</b>	1.9.1992 – 31.7.2004	Regular Government Employee
Khyber Pakhtunkhwa Agriculture Research System Peshawar, Pakistan	<b>Research Officer</b>	1.9.1991 – 31.1.1992	Pakistan Oilseed Dev. Project

## HONORS, AWARDS AND ACHIEVEMENTS

1. **Sunflower Hybrid Development:** Got certificate of commendation from MINFAL in recognition of Oilseed Development Efforts. Developed and approved Indigenous Sunflower Hybrid, “**Gulsion-98**” from Provincial Seed and released for commercial cultivation to the farmers.
2. I was awarded with a Ph.D. scholarship from **Ministry of Education, Science, Sports and Culture, Japan** (Monbusho currently called Mext-scholarship) 1999 –2003.
3. **For the first time** I reported, purified and characterized 2 Novel enzymes (NADP<sup>+</sup>-dependent Alcohol Dehydrogenase) in *Euglena gracilis* (Published in **Comp. Biochem. Physiol.** Part B: Biochemistry and Molecular Biology (2002). **132 (3): 535**
4. I was awarded with a **Post Doctoral Fellowship** at the Department of Applied Biochemistry, Graduate School of Agriculture and Biological Sciences, Osaka Prefecture University, Osaka, Japan from April 1<sup>st</sup>, 2003 to April 30<sup>th</sup>, 2004.
5. Based on my Research achievements, got **Young Scientist Award** from **International Union of Biochemistry and Molecular Biology (IUBMB)**, National Research Council, Canada at the **Hupo 2<sup>nd</sup> Annual & IUBMB XIX Joint World Congress**, Montreal, October 8-12, 2003.

6. I was one of the 11 scientists from Asian and Oceanic countries who were selected for **Travel Fellowship Award** from **Federation of Asian and Oceanic Biochemists and Molecular Biologists (FAOBMB)** to attend the FAOBMB symposium at the Imperial Queen Park Hotel Bangkok, Thailand, November 22-26, 2004.
7. I was one of the 10 scientists from the world who got F. Hoffmann-La Roche AG Canada Travel Awards (US\$ 2000) at **HUPO 5th Annual World Congress, Long Beach California, USA, October 28th to November 1st, 2006.**
8. Awarded with **Begum Rana Liaqat Ali Khan Gold Medal and XVIIth Star Laureate** 2006 from South Asia Publication at Karachi Merriot Hotel in 2007.
9. **Travel Fellowship Award** by Higher Education Commission, Islamabad to present Research Paper in “**International Medicinal and Aromatic Plant Conference on Culinary Herbs**” at **Antalya, Turkey** (April 29- May 04, 2007).
10. **Post Doctoral Fellowship** at the Department of Biology, Michigan State University USA awarded by Higher Education Commission, Islamabad 2008-09.
11. **Travel Grant Award** by the Higher Education Commission, Islamabad to present Research paper presentation Research at the “**3rd International IUPAC Conference on Green Chemistry**”, Ottawa Ontario, Canada (August 15–18, 2010).

## **MEMBERSHIPS**

- **MEMBER:** Human Proteomics Organization (**HUPO**) 2007-2008
- **MEMBER:** *Euglena* Association, Japan.
- **MEMBER:** The Higher Education Commission-National Curriculum Revision Committee in Biotechnology at Graduate and Post Graduate level.
- **APPROVED PhD/MS SUPERVISOR (Biological Sciences):** Higher Education commission Islamabad, Pakistan.
- **MEMBER:** NTS (National Testing Services of Pakistan) Subject Committee.
- **MEMBER:** Academic Council, Khyber Pakhtunkhwa Agricultural University Peshawar 2005-07).
- **MEMBER:** Frontier Agricultural Research Scientists Association 1996.

• **REVIEWER:**

1. Sarhad Journal of Agriculture, published quarterly by the Khyber Pakhtunkhwa Agricultural University Peshawar, Pakistan.
2. African Journal of Biotechnology
3. African Journal of Biochemistry Research.
4. Biotechnology Journal
5. International journal of biotechnology

**STUDENTS DETAIL**

**M. Phil Thesis Supervised (Major Supervisor)----- 11**

S. No	Name of student	Degree Awarded	Research Title	Year
1	Waqar Ali	M.Phil (Biotechnology)	PCR-Based Genetic Characterization and Quality Assessment of Local and Exotic <i>Brassica juncea</i> Germplasm	2005
2	Mian Afaq Ahmad	M.Phil (Biotechnology)	PCR-Based Genetic Characterization and Quality Assessment of Local and Exotic <i>Brassica napus</i> Germplasm	2005
3	Wisal Muhammad Khan	M.Phil (Biotechnology)	Genetic Diversity of Brassica juncea Germplasm Based on Molecular and Biochemical Characterization	2006
4	Nisar Ahmad	M.Phil (Biotechnology)	Molecular and Biochemical Characterization of Different Rapeseed ( <i>B. napus</i> & <i>B. campestris</i> ) Germplasm	2006
5	Mobina Shaukat Ali	M.Phil (Biotechnology)	Biochemical and molecular characterization of different wheat varieties on the basis of High Molecular Weight Glutenin Subunits	2007
6	Shahid Ali	M. Phil (Biotechnology)	Characterization of <i>Brassica napus</i> Germplasm Based on Molecular and Biochemical approaches	2007
7	Khalid Masoor	M.Phil (Biotechnology)	Characterization of different wheat genotypes/varieties for High Molecular Weight-Glutenin Subunits (HMW-GS)	2007
8	Zamarud Shah	M.Phil (Biotechnology)	Studies on Genetic Diversity in Pakistani Maize Genotypes Using Chromosome Specific Simple Sequence Repeat (SSR) Primer Sets	2007
9	Shaista Zeb	M.Phil (Biotechnology)	Biochemical characterization of different wheat genotypes/varieties for High Molecular Weight-Glutenin Subunits (HMWG-SU)	2008
10	Waqas Ahmad	M.Phil(Biotechnology)	Use of biochemical markers for the selection of Brassica Variants, an approach to improve rapeseed oil content and quality	2008
11	Wagma Hassan	M.Phil(Biotechnology)	<i>Agrobacterium</i> mediated transformation of <i>Brassica juncea</i> with <i>Chitinase</i> gene for enhanced resistance to fungal infection	2011

• **M. Phil Students Graduated (Co-Major Supervisor)-----15**

S. No	Name of student	Degree Awarded	Research Title	Year
1	Akhtar Haleem	M.Phil (Biotechnology)	Molecular Characterization of Allien Chromosome segments incorporated in wheat for various characters of agronomic importance	2005
2	Qazi Muhammad Rafiq	M.Phil (Biotechnology)	Molecular and phenotypic characterization of some, “A” and “D” genome derived rust resistant genetic stocks directed for wheat improvement.	2005
3	Muhammad Ali	M.Phil (Biotechnology)	Genetic Diversity of some Pakistani historical sets of bread wheat varieties based upon biochemical analysis and molecular diagnostics	2005
4	Mudassar Iqbal	M.Sc (Hons)- Agricultural Chemistry	Aflatoxin B1 (AFB1) in corn ( <i>Zea mays</i> ) collected from different ecological zones of swat valley	2006
5	Ms Rumeza Hanif	M.Sc (Hons)- Agricultural Chemistry	Estimation of ochratoxin A (OTA) in maize ( <i>Zea mays</i> L.) grown in swat valley of Khyber Pakhtunkhwa	2006
6	Muhammad Haroon Khan	M. Phil (Biotechnology)	<i>Agrobacterium</i> mediated transformation to build resistance against bacterial blight in rice	2006
7	Khan Niaz	M.Phil (Biotechnology)	Detection of mutations in ATP-binding domain of ABL-gene in chronic myeloid leukemia patients from Pakistan	2006
8	Bagadar Zeb	M.Phil (Biotechnology)	Studies on Genetic Diversity atDNA level in Pakistani wheat varieties Using Simple Sequence Repeat (SSR) Primer Sets	2007
9	Sardar Badshah	M.Phil (Biotechnology)	Development of RAPD based molecular markers for high grain protein gene in wheat	2007
10	Syed Jaffar Abbas	M.Phil (Biotechnology)	Analysis of genetic diversity in <i>Brassica</i> species	2007
11	Ms Raisa Bano	M.Phil (Biotechnology)	Development of an efficient and reliable regeneration protocol for different genotypes of <i>Brassica juncea</i>	2007
12	Ms Maryam Wasil	M.Phil (Biotechnology)	An efficient regeneration protocol for different genotypes of tomato ( <i>Lycopersicon esculentum</i> L.)	2007
13	Malik Nawaz Shuja	M.Phil (Biotechnology)	Molecular and Biochemical markers assisted selection of Maize lines against drought tolerance at early growth stages	2008
14	Syed Jehangir Shah	M.Phil (Biotechnology)		2010
15	Ms Irum Gul	M.Phil (Biotechnology)	Correlation of HCV genotypes with liver function tests in chronic hepatitis C	2010

- **Currently Mphil/ PhD Scholars Supervision (Co-Major Supervisor)-**

S. No	Name of student	Department/University	Degree
1.	Nadia	Institute of Biotechnology and Genetic Engineering, KPK Agricultural University Peshawar Pakistan	PhD
2.	Abdul Hameed Khan	Department of Horticulture, KPK Agricultural University Peshawar Pakistan	PhD
3.	Muhammad Saleem	Department of Horticulture, KPK Agricultural University Peshawar Pakistan	PhD

- **Currently M. Phil students Supervision (Major Supervisor)----- 4**

S. No	Name of student	Degree to be Awarded	Research Title	Session
1	Bushra Khattak	M.Phil (Biotechnology)	Agro-bacterium mediated transformation of chitinase gene in tomato	2009-2011
2	Rabia akbar	M.Phil (Biotechnology)	Agro-bacterium mediated transformation of wasabi gene in potato	2009-2011
3	Jaweria Gul	M.Phil (Biotechnology)	Agro-bacterium mediated transformation of chitinase gene in spinach	2009-2011
4	Mehtabullah	M.Phil (Biotechnology)		2009-2011

### **SERVICE ACTIVITIES**

1. **Head Biochemical/Analytical Division**, Institute of Biotechnology and genetic Engineering, Khyber Pakhtunkhwa Agricultural University Peshawar Pakistan.
2. **Incharge of Library**, Institute of Biotechnology and genetic Engineering, Khyber Pakhtunkhwa Agricultural University Peshawar.
3. **Teaching Biochemistry** to BSc (Hons)-Biotechnology, M. Phil (Biotechnology) and PhD (Biotechnology) students.

### **Courses Taught:**

- **Autumn 2004, 2005, 2006, 2007, 2010** (M. Phil 2<sup>nd</sup> semester), **Biochemistry-II**
- **Spring 2005, 2006, 2007, 2010, 2011** (M. Phil 1<sup>st</sup> semester), **Biochemistry-I**
- **Spring-2007** (B.Sc (Hons)-Biotechnology), **Biological Chemistry-II**
- **Autumn-2007** (B.Sc. (Hons)-Biotechnology), **Metabolism-I**
- **Spring 2010, 2011** (B.Sc. (Hons)-Biotechnology), **Enzymology**
- **Autumn 2010** (B.Sc. (Hons)-Biotechnology), **Proteomics**

4. **Chairman Farabi Science Club**, Khyber Pakhtunkhwa Agricultural University Peshawar
5. **Member Board of studies**, Institute of Biotechnology and genetic Engineering, Khyber Pakhtunkhwa Agricultural University Peshawar
6. **Member Board of studies**, Department of Soil and Environmental sciences, Khyber Pakhtunkhwa Agricultural University Peshawar
7. **Staff Editor (Pashtu)**, Khirman, Annual Magazine, Khyber Pakhtunkhwa Agricultural University Peshawar
8. **Vice President AUTA** (Agricultural University Teacher Association) 2006-2007.
9. **Executive Member AUTA** (Agricultural University Teacher Association) 2005-2006.

## **RESEARCH SKILLS**

Chromatographic (HPLC, FPLC, GC/MS, TLC) and spectrophotometric techniques, single and 2-D electrophoresis, amino acid sequencing, and other techniques related to production, fractionation, purification, expression, and biochemical characterization of proteins. Plant tissue culture & transformation techniques. Handling bacteria, fungi and yeast, Radiolabelling.

## **BRIEF STATEMENT OF RESEARCH INTEREST**

1. Molecular and Biochemical characterization of local and exotic *Brassica* species with regards to nutritional value and bio-diesel production.
2. Searching potential crop species for biodiesel production under local environment.
3. Incorporating genes encoding enzymes related to lipid metabolism (Acetyl transferase) in oilseed species for quality bio-diesel production.
4. Improving the fatty acid profile of *Brassica napus* having low level of erucic acid and glucosinolate through Molecular and Biochemical Approaches.
5. CMS mediated Canola hybrid development.
6. Characterizing wheat varieties/genotypes for HMWGS (high Molecular Weight Glutenin Subunits).

## Research Publications (Impact Paper Journals)

1. Shahid Ali, **Iqbal Munir**, M. Arif, Inamullah, Farhatullah, Ijaz Ali, Aqib Iqbal, Mushtaq Ahmad, M. Wisal Khan, S. Jaffar Abbas and Zahoor Ahmad Swati (2011) Characterization of *Brassica napus* germplasm based on molecular markers. **African J. Biotechnology 10 (16): 3035-3039.**
2. Wisal M Khan, **Iqbal Munir**, Mushtaq Ahmad, Aqib Iqbal, Ijaz Ali, Dawood Ahmad, Fida Hussain, and Zahoor A. Swati. (2011). Assessment of Genetic Diversity of *Brassica juncea* Germplasm Using RAPD Markers. . **African J. Biotechnology 10 (19): 3654-3658.**
3. Najib U Khan<sup>1</sup>, Ijaz Ali, Naeem U Ahmad, Aqib Iqbal, Latif U Rehman, **Iqbal Munir**, Muti U Rehman, Sanaullah Khan, Sajid Ali, Lubna Siddique and Zahoor A Swati (2011) Prevalence of active HCV infection among the blood donors of Khyber Pakhtunkwa and FATA region of Pakistan and evaluation of the screening tests for anti-HC. *Virology Journal* **8**: 154 doi:10.1186/1743-422X-8-154.
4. Ijaz Ali, Aqib Iqbal, Iqbal Munir (2011) Prevalence of HCV among the high risk groups in Khyber Pakhtunkhwa. *Virology Journal* **8**:296 (Doi: 10. 1186/1743-422X-8-296).
5. Malik Nawaz Shuja, Wajid Ali, Aqib Iqbal, Ijaz Ali, **Iqbal Munir**, Gulzar Ahmad, Muhammad Iqbal and Zahoor Ahmad Swati (2011) 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* **10 (18): 3521-3527.**
6. Ihsan Ullah, Aqib Iqbal, Ijaz Ali<sup>1</sup>, **Iqbal Munir**, Essa Ali<sup>1</sup>, Syed Jehangir Shah<sup>1</sup>, Najib Ullah, Sajid Ali Khan Bangash, Zahoor Ahmad Swati and Muhammad Subhan Qureshi (2011) Role of dietary supplementation in the protein content of bovine milk. *African Journal of Biotechnology* **10 (18): 3624-3627.**
7. Rozina Hamayoon, Hamayoon Khan, Lubna Naz, **Iqbal Munir**, M. Arif , and Ibni Amin Khalil (2011) Performance of Chickpea Genotypes Under Two Different Environmental Conditions. **African J. Biotechnology 10 (9): 1534-1544.**
8. **Jehan Bakht** , M. Shafi, R. Shah, R. Din and Iqbal Munir (2011). Response of maize cultivars to various priming sources. *Pak J. Bot.* **43 (1): 205-212.**
9. MUHAMMAD ARIF, MOHAMMAD TARIQ JAN, NAQIB ULLAH KHAN, IQBAL MUNIR, ZIAUDDIN, HABIB AKBAR, AND MUHAMMAD



- ZAFARULLAH KHAN (2011) EFFECT OF CROPPING SYSTEM AND RESIDUE MANAGEMENT ON MAIZE. Pakistan Journal of Botany, Volume No. 43(2): 915-920.
10. Raham Sher Khan, Syed Sartaj Alam, **Iqbal Munir**, Pejman Azadi, Ikuo Nakamura and Masahiro Mii (2010). Botrytis cineria-resistant marker-free petunia hybrid produced by MAT vector system. **Plant Cell, Tissue & Organ Culture** DOI: 10.1007/s11240-010-9888-0.
  11. Raisa Bano, Mohammad Haroon Khan, Raham Sher Khan, Hamid Rashid, **Iqbal Munir** and Zahoor A. Swati. (2010) Callogenesis and Organogenesis in three genotypes of *brassica juncea*. Pak. J. Botany **42(6): 3925-3932**.
  12. Muhammad arif, Muhammad Tariq Jan, Naqib Ullah Khan, Habib Akbar, Shad Ali khan, M.J. Khan, Ahmad Khan, **Iqbal Munir** and Aqib Iqbal (2010) Impact of plant populations and nitrogen levels on maize. Pak. J. Botany **42(6): 3907-3913**.
  13. Najib ullah khan, Lubna Siddique, Ijaz Ali, Aqib Iqbal, **Iqbal Munir**, Farzana Rashid, Sajid Ali, Zahoor Ahmad Swati (2010) Prevalence of Hepatitis B in the blood donors of N-W.F.P and FATA regions and the current scenario of HBV Infection in Pakistan. **African Journal of Biotechnology** **9(37): 6162-6166**.
  14. Naushad Ali Turi, Raziuddin, Farhatullah, Naqib Ullah Khan, **Iqbal Munir** and Sajid Khan (2010) **Combining ability analysis in *Brassica juncea* L. for oil quality traits.** **African Journal of Biotechnology** **9(26): 3998-4002**.
  15. Muhammad Arif, Mohammad Tariq Jan, Naqib Ullah Khan, Ahmad Khan, M.J. Khan and **Iqbal Munir** (2010) Effect of seed priming on growth parameters of soybean. Pak. J. Botany. Vol. **42 (4): 2803-2812**.
  16. Muhammad Arif, Ibne Amin, Mohammad Tariq Jan, **Iqbal Munir**, Khalid Nawab, Naqib Ullah Khan and Khan Bahadar Marwat (2010) Effect of Plant population and Nitrogen levels and methods of applications on ear characters and yield of Maize. **Pak. J. Botany**. Vol. **42 (3): 1959-1967**.
  17. **Sayed Jaffar Abbas, Farhatullah, Khan Bahadar Marwat, I. A. Khan and Iqbal Munir (2009) Molecular analysis of genetic diversity in *Brassica* species. Pak. J. Bot. 41 (1): 167-176**
  18. Zamarud Shah, **Iqbal Munir**, Shahid Ali, Arshad Iqbal, Saqib Mumtaz, Rab Nwaz and Zahoor Ahmed Swati (2009) Genetic diversity of Pakistani maize genotypes using chromosome specific simple sequence repeat (ssr) primer sets. **African Journal of Biotech.** **8(3):375-379**.
  19. **Sayed Jaffar Abbas, Farhatullah, Imtiaz Ahmed Khan, Khan Bahadar Marwat, and Iqbal Munir (2008) Molecular and biochemical assessment of**

- Brassica napus* and indigenous *campestris* Species. Pak. J. Bot. 40 (6): 2461-2469.
20. W. Ali, **I. Munir**, Mian A. Ahmed, Z. A. Swati (2007) Molecular Characterization of some local and exotic *Brassica juncea* germplasm. **African Journal of Biotechnology 6 (14):1634-1638**
21. **Munir, I.**, Zahoor A. Swati, R. Yamaji, H. Inui, nd Y. Nakano (2006). Purification and Chracterization of a novel NADP<sup>+</sup>-linked ADH from *Euglena gracilis* Z. **Molecular & Cellular Proteomics** volume 5 (10) (Suppl.): 379.
22. El-Awady Mohamed, Toshio Iwaki, **Iqbal Munir**, Masahiro Tamoi, Shigeru Shigeoka, Akira Wadano (2003). Over expression of bacterial catalase in tomato plants chloroplasts enhances photooxidative stress tolerance. **Plant, Cell and Environment. 26:2037-2046.**
23. **Munir, I.**, M. Nakazawa, K. Harano, R. Yamaji, H. Inui, K. Miyatake, and Y. Nakano (2002). Occurrence of a novel NADP<sup>+</sup>-linked alcohol dehydrogenase in *Euglena gracilis* Z. **Comp. Biochem. Physiol. Part B: Biochemistry and Molecular Biology. 132 (3): 535 – 540**

### RESEARCH PUBLICATIONS (Other Journals)

24. Sikandar, Waqar Ali, Israr Khan and **Iqbal Munir (2007)** Optimization of in vitro conditions for callus induction, proliferation and regeneration in wheat (*Triticum aestivum* L.) cultivars. *Biotechnology 6 (3): 420-425.*
25. Nisar Ahmad, **Iqbal Munir**, Wisal Muhammad, waqar Ali and Zahoor A. Swati (2007) PCR-based genetic diversity study of rapeseed (*B.napus* and *B.campestris*) germplasm using randomly polymorphic DNA (RAPD). **Biotechnology 6 (3):334-338.**
26. Mian Afaq Ahmad, **Iqbal Munir**, Zahoor A. Swati, Waqar Ali, Quahir Sohail and Imran khan (2007) Assessment of genetic diversity of local and exotic *brassica napus* germplasm. . P J. Biological Sciences 10(15):2490-2494.
27. Waqar Ali, Hidayatur Rahman, Kafeel Ahmad, **Iqbal Munir**, Ahmad Khan (2007) Genetic Variability among maize hybrids for yield and yield components. **Sarhad Journal of Agriculture 23(1): 75-79.**
28. Shahid Ali, Syed Meher Ali Shah, Ali Hassnain, Zamrud Shah, **Iqbal Munir (2007)** Genotypic Variation for yield and morphological traits in wheat. **Sarhad Journal of Agriculture 23(4):943-946.**

29. Zamarud Shah, Syed Mehar Ali Shah, Ali Hassnain\*, Shahid Ali, Iftikhar Hussain Khalil and **Iqbal Munir (2007)** Genotypic variation for yield and yield related traits and their correlation studies in wheat. **Sarhad Journal of Agriculture 23 (3):633-636**
30. Nisar Ahmad, Amanullah\*, Tahir Jamal, **Iqbal Munir**, Asad Ali and Munir Khan (2007) Residual effect of nitrogen applied to maize, on yield of barley. **Sarhad Journal of Agriculture 23 (3): 549-552**
31. **Munir, I.**, Z. A. Swati, M. H. Rashid, R. Yamaji, H. Inui, and Y. Nakano (2006). Separation and Properties of two NADP<sup>+</sup>-dependent alcohol dehydrogenases from *Euglena gracilis* Z. P.J. Biological Sciences 9(15):2743-2747.
32. **Munir, I.**, Mohamed El-Awady, H. Hayashi, R. Yamaji, H. Inui, A. Wadano and Y. Nakano (2004). Effect of Different Substrates on the Growth of *Euglena gracilis* and Activities of Alcohol Dehydrogenase and Glyoxylate Cycle-key Enzymes. **Applied Biological Science. 8: 23-33.**
33. Mohamed EL-AWADY, Takehiro MASUMURA, Kunisuke TANAKA2, **Iqbal MUNIR**1, Toshio IWAKI and Akira WADANO (2003) Enhancement of Oxidative Stress Tolerance in Transgenic Tomato Expressing the Spinach Copper Zinc SOD in the Chloroplasts. **Applied Biological Science. 7: 85-96.**
34. **Munir, I.**, M.S. Swati, F. Muhammad, R. Ahmad, and M. Imtiaz (1999). Heterosis in different crosses of wheat (*Triticum aestivum* L.). Sarhad Journal of Agriculture (Pakistan). **15(4): 299-303.**
35. Imtiaz, M., Z. Ahmad, R. Ahmad, and **I. Munir. (1998)**. Evaluation of relative leaf water content as a physiological index for drought tolerance in different wheat genotypes. Scientific Khyber (Pakistan). **11(2): 63 – 69.**
36. Ahmad, R., **I. Munir**, A. Zada, and Z. Shah (1997). Response of wheat varieties to different planting dates at Chitral valley. Sarhad Journal of Agriculture (Pakistan). **xiii(4): 317 – 321.**
37. Ahmad, R., Z. Quresh, and **I. Munir. (1997)**. Heterosis and heterobeltiosis studies in sunflower. Sarhad Journal of Agriculture (Pakistan). **xiii(4):377-381.**
38. Ahmad, R., M.S. Swati, H. Rehman, and **I. Munir (1997)**. Screening of wheat genotypes under different levels of salt for yield and yield components. Sarhad Journal of Agriculture (Pakistan). **xiii(3): 284 – 289.**

## RESEARCH PUBLICATIONS (ACCEPTED/SUBMITTED)

1. Rizwan Alam, Aqib Iqbal, Ijaz Ali, **Iqbal Munir**, Zahoor Ahmad and Ikhtiar Khan (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. **Under Review in Plant Physiology and Biochemistry.**
2. Lubna Siddique, Ijaz Ali, Iqbal Munir, Latifur rehman, Aqib Iqbal, Farzana Rashid, Zahoor Ahmad Swati (2010) **Prevalence of HCV among the various risk groups in Khyber Pakhtunkhwa.**
3. Ihsanullah, **Ijaz Ali**<sup>1</sup>, Iqbal Munir, Latifur rehman, Aqib Iqbal, Farzana Rashid, Zahoor Ahmad Swati (2010) **Prevalence of HCV and HCV genotypes among the IDUs in Khyber Pakhtunkhwa.**
4. Ijaz Ali, Sanaullah Khan, Abdul Hamid Jan, Shahid Niaz Khan, Aqib Iqbal, Iqbal Munir<sup>1</sup>, Sami Siraj (2010) **Mutations in HCV NS5A gene and the treatment response in hepatitis C virus genotype 3A infected patients.**
5. Iqbal Munir, Shahid Ali, Mushtaq Ahmad Jaffar Abbas, Farhatullah, and Zahoor Ahmad Swati (2011) Biochemical characterization of local and exotic *Brassica napus* germplasm. **African J. Biotechnology (Accepted).**
6. **Iqbal Munir**, Mohamed El-Awady, Aqib Iqbal and Yoshihisa Nakano. (2011). Purification and Characterization of a Novel NADP<sup>+</sup>-dependent Alcohol Dehydrogenase from *Euglena gracilis* Z. **Journal of Eukaryotic Microbiology (Submitted)**

## INTERNATIONAL/NATIONAL TRAININGS

1. “**Case Based Teaching**” organized by the Higher Education Commission, Islamabad Pakistan on August 3-4 at HEC Regional Centre Peshawar.
2. Training on **HPLC-Based Amino Acid Analysis System; techniques, Troubleshooting and LC solution** conducted from August 13-15, 2007 at (Shimadzo Asia Pacific) PTE LTD Singapore.
3. Training on **GC/MS (Gas chromatography/Mass spectroscopy) techniques, Troubleshooting and GCMS solution** conducted from August 22-24, 2005 at (Shimadzo Asia Pacific) PTE LTD Singapore.

4. Application training on **HPLC (High Performance Liquid Chromatography)** conducted on August 25, 2005 at (Shimadzo Asia Pacific) PTE LTD Singapore.
5. Demonstration training on “**Real Time PCR**” at the Shifa College of Medicine, Islamabad on August 12, 2005.
6. Training Course on, “**Plant Molecular Genomics**” from June 06-10, 2005 at the Institute of Agri-Biotechnology and Genetic Resources, NARC, Islamabad Pakistan.
7. Group Training Course on, “**Gene Manipulation for Agriculture**”, Under JICA programme at the Osaka Prefecture University Japan w.e.f. July 28, 1997 – November 30, 1997.

## **OTHER RESEARCH OR CREATIVE ACCOMPLISHMENTS**

1. **Novel Enzyme Report:** I reported, purified and characterized 2 Novel enzymes (NADP<sup>+</sup>-dependent Alcohol Dehydrogenases) in *Euglena gracilis* (Published in **Comp. Biochem. Physiol. Part B: Biochemistry and Molecular Biology** (2002). **132 (3): 535**
2. **Sunflower Hybrid Development:** Developed and approved Indigenous Sunflower Hybrid, “**Gulsion-98**” from Provincial Seed and released for commercial cultivation to the farmers (1998).
3. Supervised the production of tones of Breeder nucleus, Pre-basic and Basic seed of soybean, Canola and hybrid seed of sunflower for commercial cultivation in Pakistan (1992-1999).
4. Development and Transformation of advanced production technology of soybean, sunflower and canola through adaptive research trials (1992-1999).

## **SELECTED PROFESSIONAL PRESENTATIONS**

1. Research paper presentation at the conference being organized by Faculty of Agriculture Rawalakot, The University of Azad Jammu and Kashmir, on “**Prospects and Challenges to Sustainable Agriculture**” from **14-16 July 2011** at Rawalakot Azad Kashmir.
2. Research paper presentation Research at the 3rd International IUPAC Conference on Green Chemistry, the Westin Ottawa Hotel, Ontario, Canada (August 15–18, 2010).

3. Research paper presentation at the “GLBRC (Great Lake Bio-energy Research Center) Retreat 2009”, at the South Bend Century Center and Marriott in South Bend, Indiana (June 2-4, 2009).
4. Research paper presentation at the ‘International Medicinal and Aromatic Plants Conference on Culinary Herbs’ in Antalya, Turkey (29 April-04 May 2007).
5. Research paper presentation at HUPO 5th Annual World Congress, Long Beach California, USA, October 28th to November 1st, 2006.
6. Two Research papers presentation at the National Symposium on “Biotechnology for Economic Prosperity” at Nathiagali Pakistan, July 24-26, 2006.
7. Research paper presentation at the FAOBMB 17<sup>th</sup> symposium/ IUBMB 2<sup>nd</sup> Annual meeting at Bangkok, November 22-26, 2004.
8. Oral and Poster research paper presentation at the Hupo (Human Proteomics) 2<sup>nd</sup> Annual & IUBMB (International Union of Biochemistry and Molecular Biology) XIX Joint World Congress at Montreal, October 8-12, 2003.
9. Oral and poster research paper presentation at the Annual Meeting of the Euglena Research Association held at Osaka Prefecture University, Osaka, Japan University, Japan in November 2003.
10. Oral and poster research paper presentation at the Annual Meeting of the Euglena Research Association held at Osaka Prefecture University, Osaka, Japan University, Japan in October 2002.
11. Oral and poster research paper presentation at the Annual Meeting of the Euglena Research Association held at Okayama University, Japan in September 2001.
12. Oral research paper presentation at the Japan Society for Bioscience, Biotechnology, and Agrochemistry; Kansai, west Japan, Central Shikoku Union Conference held at Kinki University, Nara, Japan in October 2001.
13. Oral research paper presentation at the Japan Society for Bioscience, Biotechnology, and Agro-chemistry; Kansai, west Japan, Central Shikoku Union Conference held at Okayama University, Okayama, Japan in October 2000.