

# CURRICULUM VITAE

**Name:** Prof. Dr. Rehana Asghar

**Father's Name:** Asghar Ali

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Mirpur University of Science and Technology (MUST),  
Mirpur-10250 (AJK), Pakistan



## 1. EDUCATIONAL BACK GROUND

Year	Degree	Subject	Institution/ University
2005	Post-Doctorate	Biotechnology	University of California, Riverside, USA
1993	Post-Doctorate	Biotechnology	University of California, Riverside, USA
1992	Ph.D	Botany	University of California, Riverside, USA
1988	M.S	Botany	University of California, Riverside, USA
1982	M.Sc.	Botany	University of Balochistan, Quetta, Pakistan
1980	B.Sc.	Premed	University of Balochistan, Quetta, Pakistan
1977	F.Sc.	Premed	Board of Intermediate and Secondary Education, Quetta.
1975	Matric	Science	University of Balochistan, Quetta.

## 2. PROFESSIONAL EXPERIENCE

**08/06/2014- Present**      **Tenured Professor**  
Department of Biotechnology  
Mirpur University of Science and Technology (MUST)  
Mirpur-10250 (AJK), Pakistan

- 08/06/2010- 08/06/2014**      **Professor on Tenure Track**  
 Department of Biotechnology  
 Mirpur University of Science and Technology (MUST)  
 Mirpur-10250 (AJK), Pakistan
- 04/03/2010-07/06/2010**      **Professor on Tenure Track**  
 Department of Botany  
 University of Azad Jammu and Kashmir,  
 Muzaffarabad-13100 (AJK), Pakistan.
- 16/01/2010 – 03/03/2010**      **Professor (BPS-21)**  
 Department of Botany  
 University of Azad Jammu and Kashmir,  
 Muzaffarabad-13100 (AJK), Pakistan.
- 30/05/2007-15/01/2010**      **Professor (BPS-21)**  
 Department of Botany  
 Pir Mehr Ali Shah  
 Arid Agriculture University Rawalpindi  
 Rawalpindi-46000, Pakistan.
- 02/08/2006- 27/06/2007**      **Professor (BPS-20)**  
 Department of Botany  
 Pir Mehr Ali Shah  
 Arid Agriculture University Rawalpindi  
 Rawalpindi-46000, Pakistan.
- 29/09/2000-01/08/2006**      **Associate Professor (BPS-19)**  
 Department of Botany  
 Pir Mehr Ali Shah  
 Arid Agriculture University Rawalpindi  
 Rawalpindi-46000, Pakistan.
- 1/10/1994 - 28/9/2000**      **Assistant Professor (BPS-18)**  
 Department of Botany  
 University of Balochistan,  
 Quetta- 83700, Pakistan.
- 2/4/1984 –30/09/1994**      **Lecturer (BPS-17)**  
 Department of Botany  
 University of Balochistan,  
 Quetta-83700, Pakistan.
- 7/6/2004-31/5/2005**      **Postdoctoral Research Associate in Agricultural Experiment Station.** Sponsored by HEC Post-Doc fellowship Program  
 Timothy J. Close's laboratory,

Department of Botany and Plant Sciences  
University of California, Riverside CA 92521-0124,  
U.S.A.

**26/6/1992 – 24/3/1993**

**Postdoctoral Research Associate**

Timothy J. Close's laboratory,  
Department of Botany and Plant Sciences  
University of California, Riverside CA 92521-0124,  
U.S.A.

**1/1991 - 5/1991**

**9/1991 - 3/1992**

**Teaching Assistant**

Department of Botany and Plant Sciences,  
University of California, Riverside CA 92521-0124  
U.S.A.

**11/1988 - 12/1990**

**Research Assistant**

Timothy J. Close's laboratory  
Project title: Site directed mutagenesis and electroporation of  
luciferase gene into protoplast of barley aleurone.  
Department of Botany and Plant Sciences  
University of California, Riverside CA 92521-0124  
U.S.A.

**3. AWARDS AND HONORS:**

- i. Civil award “ **Tamgha-e-Imtiaz**” was conferred on August 14, 2014 by the Government of Pakistan.
- ii. **Third World Academy of Sciences Award (TWAS)** was (1998) by the Pakistan Academy of Sciences for the young scientists in the south in the field of biology.
- iii. **Outstanding Student Presentation Award** in First California State University Electron Microscopy Colloquium in 1991 (U.S.A.).
- iv. **Post Doctoral Research Fellowship** awarded by Higher Education Commission, Govt. of Pakistan during 2004-2005.
- v. **Fellowship Award** from the American Association of University Women Organization during 1991-1992 (U.S.A.).
- vi. **Honor certificate** from Gamma Sigma Delta Honor Society of Agriculture in 1991 (U.S.A.).

- vii. **Quaid-e-Azam scholarship** was awarded by the Ministry of Education for higher studies abroad during 1986-1990.
- viii. **First position** throughout Science Faculty and University in M.Sc. during the session 1981-1982 from the University of Balochistan, Quetta, Pakistan..
- ix. **Approved Ph.D.** supervisor declared by Higher Education Commission of Pakistan.
- x. **President Award** Scholarship for Secondary School Certificate Examination.

#### 4. ADMINISTRATION:

- i. **Dean, Faculty of Science**, Mirpur University of Science and Technology (MUST) Mirpur, AJK, Pakistan from 10<sup>th</sup> January 2015 till present.
- ii. **Chairperson, Department of Biotechnology**, Mirpur University of Science and Technology (MUST) Mirpur, AJK, Pakistan from 8<sup>th</sup> June, 2010 till 14<sup>th</sup> April 2015.
- iii. **Director, Advanced Studies and Research Board**, Mirpur University of Science and Technology (MUST) Mirpur, AJK, Pakistan from 12<sup>th</sup> February 2013 till 28<sup>th</sup> February 2014.
- iv. **Chairperson, Department of Botany**, Pir Mehr Ali Shah Arid Agriculture University Rawalpindi from 15<sup>th</sup> September, 2003 to 6<sup>th</sup> January, 2010
- v. **Incharge Botany Section, Development Programme**, Department of Biological Sciences, Pir Mehr Ali Shah Arid Agriculture University Rawalpindi since 2000-2003.

#### 5. RESEARCH GRANTS RECEIVED AS PRINCIPLE INVESTIGATOR:

1. Virulence analysis of *Xanthomonas campestris* pv Sesami and *Pseudomonas syringae* pv sesame the causal organisms of sesame (*Sesamum indicum* L.) bacterial blight. Funded by HEC during 2007-2010. **Rs. 6.413 Millions**
2. Characterization to determine the adaptive role of dehydrins under drought stress in wheat (*Triticum aestivum* L.). ALP project funded by PARC during 2006-2009. **Rs. 2.943 Millions**
3. Physiological and anatomical studies of bark splitting disorder of apple in Balochistan. Funded jointly by World Bank and Government of Balochistan under Competitive Grant System of ARP-II during 1997-2000. **Rs. 0.5 Millions**

4. Strengthening and up-gradation of Biotechnology Lab. at Mirpur University of Science and Technology (MUST), Mirpur (AJ&K). Funded by Higher Education Commission, Islamabad during 2011-2012. **Rs. 0.879 Millions**
5. Engineering and characterization of Lichenase genes for improved characteristics. Submitted to Higher Education Commission, Islamabad. Duration 2012-1015. **Rs. 9.975 Millions**

## 6. ACADEMIC PERFORMANCE:

### a. Ph.D. Students Supervised:

- i. Syed Abdul Majid 2005 Metabolic changes associated with drought stress in some promising wheat (*Triticum aestivum* L.) cultivars.
- ii. Ghulam Murtaza 2006 Studies of Salicylic acid induced changes during seed development and seed germination in pea (*Pisum sativum* L.)
- iii. Iqbal Hussain 2007 Genetic transformation of fungal resistance genes in potatoe (*Solanum tuberosum* L. ).
- iv. Badar-uz-Zaman 2008 Growth responses and ionic relations in *Brassica compestris* L. and *B. juncea* L. under physiological water stress.
- v. Siddiqa Fardous 2009 Virulence analysis of *Xanthomonas campestris* PV Sesami and *Pseudomonas syringae* PV Sesami the causal organisms of sesamae (*Sesamum indicum* L.) bacterial blight.
- vi. Imran Ali 2010-2015 Molecular Engineering of Endoglucanase/s for improved characteristics
- vii. Rizwan Ullah 2011-2016 Partitioning of non-polar organic contaminants in the environment of Azad Jammu and Kashmir (AJ&K), Pakistan
- viii. Shoukat Hussain 2011-2016 Nutritional and phytochemical assessment of

genus *Morus* in different ecotypes of AJK and its identification by gene bar coding.

**b. M. Phil. Students Supervised:**

- i. Siraj Kakar 2000 An investigation of apple bark split disorder in Balochistan.
- ii. Ahmed Ali 2008 Morphological and physiological studies of ethnobotanically important grasses of Potohar region.
- iii. Rehana Kausar 2008 Characterization of dehydrins in local cultivars of wheat (*Triticum aestivum* L.) under drought.
- iv. Samar Fatima 2008 Screening of local varieties of *Sorghum bicolor* (L.) Moench under drought using morphological and physiological markers.
- v. Shamim Akhtar 2008 Evaluation of some invasive species for the allelopathic potential using various screening techniques.
- vi. Madiha Sadiq 2009 Study of polypeptides induced by drought stress in some local varieties of barley (*Hordeum vulgare* L.).
- vii. Saima Jabeen 2009 Stem histopathology of genotypes of sesame infected by *Pseudomonas syringae* PV sesame causal organism of sesame bacterial blight.
- viii. Rashid Ahmed 2013 Fabrication of Chitosan PVA zinc oxide nanofibers for antibacterial activity.
- ix. Zafar Ahmed 2013 Isolation and characterization of FeS oxidizing bacteria in acid mine drainage of Kala Katha near Hassan Abdal.
- x. Aisha Erum 2013 The effect of NaCl on germination and seedling development of Chakwal-50 and NARC-2011 wheat varieties.
- xi. Farhat Unisa 2013 Biosorption of nickel and chromium from fungus *Aspergillus niger*.

- xii. Qadeer Ahmed 2013 Phytosynthesis of silver nanoparticles by leaf extracts of *Parthenium hysterophorus* L. and *Sonchus asper* L.
- xiii. Abeer Rehman 2013 Biosorption of lead and cadmium from fungus *Aspergillus niger*.
- xiv. Shakeel Ahmed 2013 Green synthesis of silver nanoparticles by leaf extracts of *Solanum nigrum* L. and *Solanum xanthocarpum* Schrad.
- xv. Rubina Rashid 2014 Antimicrobial activity of *Adiantum capillus* and *Adiantum formosum*.
- xvi. Humaira Kayani 2014. Genetic diversity among uropathogens (*Escherichia coli*.)

**c. M.Sc. Students Supervised:**

- i. Shazia Jabeen 1998 Effect of salt stress and drought on the activities of  $\alpha$ -amylase in the aleurone and scutellum of *Zea mays* L. v. Agaiti.
- ii. Muhammad Nisar 2000 Anatomical and physiological study of apple bark splitting disorder in Pishin district.
- iii. Muhammad Naveed Raja 2002 Establishment of an efficient regeneration system from the callus in wheat (*Triticum aestivum* L. ).
- iv. Iffat Naheed 2003 Embryogenic callus production, regeneration efficiency and assessment of regenerants in three cultivars of rice.
- v. Kishwar Sultana 2003 Transgenic plant production by *Agrobacterium* mediated transformation in tobacco.
- vi. Raheela Akhtar 2003 Factors influencing transformation efficiency of rice (*Oryza sativa* L. cv. Basmati).
- vii. Rabia Siddique 2004 Inter and Intra-specific variation in SDS-PAGE electrophorograms of total seed protein in rice (*Oryza sativa* L.) germplasm.

- viii. Tayyaba Siddique 2004 Inter and Intra-specific variation in SDS-PAGE electrophorograms of total seed protein in chickpea (*Cicer areitinum* L.) germplasm.

#### **7. APPOINTMENTS AS MEMBER OF SUPERVISORY COMMITTEES:**

1. Member of the supervisory committee for fifteen Ph.D. students.
2. Member of the supervisory committee for thirty two M.Phil. students.
3. Member of the supervisory committee for twelve M.Sc. students.

#### **8. APPOINTMENTS AS EXAMINER/THESIS EVALUATION**

- Five Ph.D. Dessertations of the Department of Plant Sciences, Quaid-e-Azam University, Islamabad.
- One Ph.D. Dessertations of the Department of Biochemistry, Quaid-e-Azam University, Islamabad
- Six M.Phil. Theses of the Department of Biology, Quaid-e-Azam University, Islamabad.
- Four M.Phil. Theses of the Department of Plant Sciences, Quaid-e-Azam University, Islamabad.
- Two M.Phil. Theses of the Department of Biochemistry, Quaid-e-Azam University, Islamabad.
- Four M.Sc. Theses of the Department of Botany, University of Peshawar.
- Twenty M.Sc. theses in the Department of Botany, University of Azad Jammu and Kashmir, Muzafarabad, AJK
- M.Sc. Examination at GC University, Lahore, University of Peshawar, B. Z. University, Multan, University of Balochistan, Quetta and University of Azad Jammu and Kashmir, Muzaffarabad. AJK.
- M. Sc. Examination at GC University Lahore, University of Peshawar, B.Z. University of Multan, University of Balochistan Quetta and University of Azad Jammu, and Kashmir, Muzaffarabad. AJK.



- Member of the Comprehensive Examination Committee for M.Sc., M. Phil. and Ph.D. in Botany, Department of Biological Sciences, PMAS Arid Agriculture University, Rawalpindi during 2001-2003.
- Member of the Ph.D. Oral Comprehensive Examination Committee in the Departments of Plant Breeding and Genetics, Range Management and Forestry, Plant Pathology, Soil Science, Biochemistry and Horticulture at PMAS, Arid Agriculture University Rawalpindi.
- Chairperson Comprehensive Examination Committee for M.Sc., M. Phil. and Ph.D. in the Department of Botany, PMAS Arid Agriculture University Rawalpindi from 2003- 2010.

## **9. SUPERVISION OF M.PHIL./ PH.D. SCHOLARS UNDER INDIGENOUS SCHOLARSHIP PROGRAM:**

1. Four M. Phil. scholars have completed their M.Phil. degrees at the PMAS Arid Agriculture University Rawalpindi.
2. Four Ph.D. scholars were supervised during initial stage uptill the synopsis approval at the PMAS Arid Agriculture University Rawalpindi.
3. Supervised one Ph.D. scholar at he Mirpur University of Science and Technology (MUST), Mirpur (AJK).

## **10. PRESENTLY ENROLLED STUDENTS:**

1. Six M.Phil. students
2. Six Ph.D. student

## **11. PUBLICATIONS :**

### **a. INTERNATIONAL**

1. **Asghar, R,** and D.A. DeMason. 1990. Developmental changes in the cotyledons of *Lupinus luteus* L. during and after germination. American Journal of Botany. 77(10):1342-1353. **Impact factor: 2.603**
2. **Asghar, R,** and D. A. DeMason. 1992. Differential activities of acid phosphatase from abaxial and adaxial regions of *Lupinus luteus* L.(Fabaceae) cotyledons. American Journal of Botany. 79(10):1134-1144. **Impact factor: 2.603**

3. **Asghar, R.**, R.D. Fenton, D.A. DeMason, and T.J. Close. 1994. Nuclear and cytoplasmic localization of maize embryo and aleurone dehydrin. *Protoplasma*. 177:87-94. **Impact factor: 3.171**
4. Hussain, I., H. Rashid, and **R. Asghar**. 2005. Morphogenetic potential of three potato cultivars from diverse explant source a prerequisite for in genetic manipulation. *Pakistan Journal of Botany*. 37(4) 889-898. **Impact factor: 0.822**
5. Cui, X., J. Xu, **R. Asghar**, P. Condamine, J. T. Sevansson, S. Wanamaker, M. Roose and T. J. Close. 2005. Detecting single-feature polymorphisms through high density oligonucleotide microarray. *Bioinformatics*. 21(20): 3852-3858. **Impact factor: 4.981**
6. Hussain, I., Z, Chudhary, A. Mohammad, **R. Asghar**, S.M. S. Naqvi, H. Rashid. 2006. Effect of Chlorocholine chloride, BAP and Sucrose on *invitro* turerization in potato (*Solanum tuberosaum* L. CV. Cardinal). *Pakistan Journal of Botany*. 38 (2):275-282. **Impact factor: 0.822**
7. Naeem, R., I. Ahmed, **R. Asghar** and B. Mirza. 2006. Characterization of *Hordeum vulgare* accessions of Pakistan by Hordein SDS-PAGE. *Cereal Research Communications*. 34 (4): 1247-1254. **Impact factor: 0.624**
8. Murtaza, G., **R. Asghar**, S. A. Majid, A. Waheed and S. N. Mirza. 2006. Anatomical and palynological studies in some Filicales from Neelam valley Muzaffrabd, Azad Kashmir. *Pakistan Journal of Botany*. 38(4). 921-929. **Impact factor: 0.822**
9. Malik, A., F. Hussan, A. Waheed, G. Qadir and **R. Asghar**. 2006. Interactive effect of irrigation and phosphorus on green gram (*Vigna radiate*). *Pakistan Journal of Botany*. 38(4).1119-1126. **Impact factor: 0.822**
10. Sultana, K., M. Gul, S.S. Firdous and **R. Asghar**. 2007. Hymenomycetes from Multan district. *Pakistan Journal of Botany*. 39(2): 651-657. **Impact factor: 0.822**
11. Murtaza, G., **R. Asghar**, S. Shahbaz and S. A. Majid. 2007. The yield and yield component of pea (*Pisum sativum*) as influenced by salicylic acid. *Pakistan Journal of Botany*. 39(2): 551-559. **Impact factor: 0.822**
12. **Asghar, R.**, T. Rehman and M. Tariq. 2007. Propagation of *Pleurotus sajor-caju* (Oyster mushroom) through tissue culture. *Pakistan journal of Botany*. 39(4): 1383-1386. **Impact factor: 0.822**
13. A. Akram, M. Fatima, S. A. Ali, G. Jilani. and **R. Asghar**. 2007. Growth, yield and nutrients uptake of Sorghum in response to integrated phosphorous and potassium management. *Pakistan Journal of Botany*. 39(4): 1083-1087. **Impact factor: 0.822**

14. Majid, S.A., **R. Asghar** and G. Murtaza. 2007. Potassium-calcium interrelationship linked to drought tolerance in wheat (*Triticum aestivum* L.). Pakistan Journal of Botany. 39(5): 1609-1621. **Impact factor: 0.822**
15. Majid, S.A., **R. Asghar** and G. Murtaza. 2007. Yield stability analysis conferring adaptation of wheat to pre-and post-anthesis drought conditions. Pakistan Journal of Botany. 39(5): 1623-1637. **Impact factor: 0.822**
16. Firdous, S.S., **R. Asghar**, M. I. Haque and S. N. Afzal. 2007. Development of hypersensitive response by *Xanthomonas campestris* pv *sesami* on *Lycopersicon esculantum* L. and *Solanum tuberosum* L. leaves. Pakistan Journal of Botany. 39(6):2135-2139. **Impact factor: 0.822**
17. Yousaf, Z., Z. K. Shinwari, **R. Asghar** and A. Parveen. 2008. Leaf epidermal anatomy of some selected species of genus *Allium*. Pakistan Journal of Botany. 40(1): 77-90. **Impact factor: 0.822**
18. Murtaza, G., S. A. Majid and **R. Asghar**. 2008. Morpho-palynological and anatomical studies on fern, *Schizaea dichotoma* from Neelum Valley, Azad Kashmir. Pakistan Journal of Botany. 40(1). 59-63. **Impact factor: 0.822**
19. Firdous, S. S., **R. Asghar**, M. I. Haque, S. N. Afzal and M. Y. Mirza, 2009. Pathogenesis of *Pseudomonas syringae* pv *Sesami* associated with sesame bacterial leaf spot. Pakistan Journal of Botany. 41(2): 927-934. **Impact factor: 0.822**
20. Badr-uz-Zaman, M. Salim and **R. Asghar**. 2010. Role of  $Ca^{2+}$  on growth of *Brassica campestris* L. and *B. juncea* (L.) Czern & Coss. under  $Na^+$  stress. Journal of Integrative Plant Biology. 52(6): 549-555. **Impact factor: 3.335**
21. Firdous, S. S. **R. Asghar**, M. I. Haque, S. N. Afzal and S. M. Mughal. 2010. Isolation, purification, characterization and identification of virulence factor of *Pseudomonas syringae* PV. *Sesami* and *Xanthomonas campestris* PV. *Sesami*. Pakistan Journal of Botany. 42(6) 4191-4198. **Impact factor: 0.822**
22. Murtaza, G. and **R. Asghar**. 2012.  $\alpha$ -Amylase activities during seed development and germination in pea (*Pisum sativum* L.) treated with salicylic acid. Pakistan Journal of Botany. 44(6):1823-1829. **Impact factor: 0.822**
23. Murtaza, G. and **R. Asghar**. 2013. Effect of salicylic acid on acid phosphatase activity during seed development and germination in pea (*Pisum sativum* L.). International Journal of Agriculture and Biology. 15(3): 493-498. **Impact factor: 0.902**
24. Sadiq, M., **R. Asghar**, R. Qureshi and A. Ali. 2013. Study of polypeptide induced by drought stress in some local varieties of Barley from Pakistan. Pakistan Journal of Botany. 45(4):1251-1254. **Impact factor: 0.822**

25. Murtaza, G. and **R. Asghar**. 2013. Effect of salicylic acid on sucrose synthase activity during seed development and germination in pea (*Pisum sativum* L.). Bangladesh Journal of Botany. 42(1):83-90. **Impact factor: 0.127**
26. Firdous, S., **R. Asghar**, M.I. Haque, S. M. Mughal and S. N. Afzal. 2013. Characterization of culture filterates of *Pseudomonas syringae* PV. Sasami and *Xanthomonas campestris* PV. Ssesami isolates associated with sesame bacterial blight. Pakistan Journal of Botany. 45(4): 1461-1468. **Impact factor: 0.822**
27. Firdous, S. S. **R. Asghar**, and G. Murtaza. 2014. Histopathology of leaf spot of Sesame (*Sesamum indicum* L.) caused by *Pseudomonas syringae* pv. Sesami. Journal of Animal and Plant Science. 24(3):814-819. **Impact factor: 0.550**
28. Akhtar, S., N. Bangash, **R. Asghar**, M. Munir and N. Khalid. 2014. Allelopathic assessment of selected invasive species of Pakistan. Pakistan Journal of Botany. 46(5): 1709-1713. **Impact factor: 0.822**
29. Ali, I., **R. Asghar**, S. Ahmed, M. Sajjad, M. Tariq, W. Akhtar 2015. mRNA secondary structure engineering of Thermobifida fusca endoglucanase (Cel6A) for enhanced expression in *Escherichia coli*. World Journal of Microbiology Biotechnology. 31(3): 499-506. **Impact factor: 1.779**
30. Ahmed, Z., A. Afreen, M. Mehmood, I. Ali, **R. Asghar** and M. Aziz. 2015. One-step synthesis of Ag nano-assemblies and study of their antimicrobial activities. Journal of Nanostructural Chemistry. 5:325–331 (DOI 10.1007/s40097-015-0164-z)
31. Shahzad, M., R. Qureshi, M. I. Haque, **R. Asghar**, M. Munazir and A. Hanif. 2014. Seed born mycoflora of different Berseen cultivars of Pakistan. Submitted. Pakistan Journal of Botany. **Impact factor: 0.822**
32. Badr-uz-Zaman, M. Salim and **R. Asghar**. 2014. Ions variability of *Brassica juncea* L. and *B. campestris* L. under osmotic impact of sodium chloride during germination and seedling development. Submitted. Pakistan Journal of Botany. **Impact Factor: 0.822**

#### **b. NATIONAL**

33. Ali, I., Ahmed, W., Tariq, M., **Asghar, R.**, Hussain, M. A., 2015. Therapeutic Potential of Ethanolic Extract of *Solanum nigrum* for Lipofundin-induced Hyperlipidemia in rabbits. Pure and Applied Biology. (Submitted)
34. Ali, I., Abbassi, A. A., Niaz, U., **Asghar, R.**, Ishaq, K., Aziz, T., Hussain, M. A. 2015. Molecular Analysis of Families Afflicted with Autosomal Recessive

Occulocutanious Albinism From Azad Jammu And Kashmir. Pure and Applied Biology. (Accepted)

35. Ahmad, Z., Afreen, A., Mehmood, M., Ali, I., **Asghar, R.**, Aziz, M. 2015. One-step synthesis of Ag nano-assemblies and study of their antimicrobial activities. J Nanostruc Chem. 5: 325-331.
36. **Asghar, R.**, A.A. Dasti, and R. Akhtar. 1989. Anatomical studies of epidermis in some members of the family Lamiaceae from Balochistan. J. of Res. (Science). 2:1-6.
37. **Asghar, R.**, and D. A. DeMason. 1995. Homogeneous and heterogeneous protein bodies: a developmental study in the cotyledons of *Lupinus luteus* L. Pak. J. Plant Sciences. 1: 57-73.
38. **Asghar, R.**, and D. A. DeMason. 2000. Characterization of  $\alpha$ -galactosidase in abaxial and adaxial regions from cotyledons of *Lupinus luteus* L. (Family Fabaceae) Proc. Pak. Acad. Sci. 37(2): 133-142. **(HEC Recognized, X)**
39. **Asghar, R.**, T. Siddique and M. Afzal. 2003. Inter and Intra-specific variation in SDS-PAGE electrophorograms of total seed protein in chickpea (*Cicer areitinum* L.) germplasm. Pakistan Journal of Biological Sciences. 6(24): 1991-1995.
40. **Asghar, R.**, M. Ahmed, M. Zafar, A. Akram, J. Mehmood and M. Hassan. 2003. Antibacterial efficacy of *Acacia modesta* wall. miswak against dental pathogen. Pakistan Journal of Biological Sciences. 6 : 2024-2025.
41. Awan, A. A., S. A. Majid and **R. Asghar**. 2004. Traditional and medicinal uses of some spice plants of Neelum vally District Muzafarabad, Azad Kashmir. Science International.16(2), 147-150.
42. Awan, A. A., S. A. Majid and **R. Asghar**. 2004. Folk use of medicinal plants of Daokhum and allied areas of Jehlum Vally, Muzafarabad, Azad Kashmir. Science International. 16(2), 155-159.
43. Nasira, A., S. Akhtar, M. Ahmad, **R. Asghar**, M. Ashfaq, M. Zafar and M. Saqib. 2004. Seed borne mycolfora of sesame (*Sesamum indicum* L.) and their effect on germination and seedling. Pakistan Journal of Biological Sciences. 7(2): 243-245.
44. **Asghar, R.**, R. Siddique and M. Afzal. 2004. Inter and Intra-specific variation in SDS-PAGE electrophorograms of total seed protein in rice (*Oryza sativa* L.) germplasm. Pakistan Journal of Biological Sciences. 7(2): 139-143.

45. **Asghar R.**, M. N. Khan and S. A. Kakar. 2004. Structural and biochemical study of apple (*Malus pumilo* L.) bark splitting disorder in Balochistan. Pakistan Journal of Biological Sciences. 7(6): 916-920.
46. Murtaza, G., S. A. Majid and **R. Asghar**. 2004. Morpho-palynological studies on the climbing fern *Lygodium japonicum*. Asian Journal of Plant Sciences. 3(6): 728-732.
47. Noor, M. J., M. Ahmed, **R. Asghar**, A. Kanwal and S. Pervaiz. 2004. Palynological studies of cultivated plant species at University of Arid Agriculture, Rawalpindi, Pakistan. Asian Journal of Plant Sciences. 3(4): 476-479.
48. **Asghar, R.** B. Zaman, N. Nadir and Q. A. Nawaz. 2004. The effect of autoexhaust pollution on the growth of road side plants in twin cities, Rawalpindi and Islamabad. Sarhad J. Agric. 20(3): 415-418. **(HEC Recognized, X)**
49. Pervaiz, S., **R. Asghar**, M. Ahmed, A. Akram, A. Kanwal, and M. J. Noor. 2005. Palynological study of wild plant species of University of Arid Agriculture, Rawalpindi. Pakistan. Hamdard Medicus. XLVIII (1): 1. 5-9.
50. Zaman, B. U., **R. Asghar**, M. Salim, S. Ali, B. H. Niazi, A. Ali and I. A. Mahmood. 2006. Growth and ionic relations of *Brassica campestris* (L.) and *B. juncea* (L.) Czern & Coss under induced salt stress. Pak. J. Agric. Sci. 43(3-4):1-5. **(HEC Recognized, Y)**
51. Kanwal, A., M. Ahmad, **R. Asghar**, M. J, Noor and S. Pervaz. 2006. Pharmacognostic studies of local medicinal plant *Pogamia pinnata*. Hamdard Medicus XLIX (3):106-109.
52. Zaman, B. U., M. Salim, **R. Asghar**, B. H. Niazi, I. A. Mahmood and A. Ali. 2008. Growth response and ionic relation in two *Brassica* species under water stress conditions. Pak. J. Sci. Ind. Res. 51(1) 31-35.
53. Murtaza, G., **R. Asghar** and S. A. Majid. 2010. Changes in specific activity of ascorbate peroxidase during seed development of pea (*Pisum sativum* L.) treated with salicylic acid. African Journal of Biotechnology. 9(33). 5333-5337.

## 12.PAPERS PUBLISHED IN PROCEEDINGS OF CONFERENCES:

1. Close, T. J., R. D. Fenton, A. Yang, **R. Asghar**, D. A. DeMason, D.E. Crone, N.C. Meyer, and F. Moonan. 1993. Dehydrin: the protein. In: Response of Plants to

cellular Dehydration during Environmental Stress, pp. 104-118. vol 10. T. J. Close, E. A. Bray, eds., American Society of Plant Physiologist, Rockville, Maryland.

2. **Asghar, R.** 1993. Biochemical and structural changes in the reserve proteins of *Lupinus luteus* L. cotyledons during seed germination and seedling development. In: *Advances in Plant Tissue Culture*, pp 83-100. I. Ilahi, ed., Proceedings of the 3<sup>rd</sup> national meeting of Plant Tissue Culture, University of Peshawar.

### **13. BOOKS REVIEWED:**

1. Phycology. 2005. Higher Education Commission of Pakistan, Islamabad. Pages 1-165.
2. Wahid, A. and M. A. Khan. 2006. Viruses, bacteria and Thalloid Organisms. Higher Education Commission of Pakistan, Islamabad. Pages 1-228.
3. Plant Physiology. 2007. Higher Education Commission of Pakistan, Islamabad. Pages 1-250.

### **14. COURSES TAUGHT AT POST GRADUATE LEVEL**

	<b>Course Title</b>	<b>Duration</b>
i.	Plant Physiology	1/4/93- 28/9/2000
ii.	Plant Biochemistry	1/4/93- 28/9/2000
iii.	Molecular Genetic.	1/4/93- 28/9/2000
iv.	Bacteriology	2/4/1984-10/12/1985
v.	Virology	2/4/1984-10/12/1985
vi.	Economic Botany	1/3/94-15/12/1994
vii.	Plant Anatomy	2/4/1984-10/12/1985, 1/1/1991-15/3/1991. 2000-2010
viii.	Cytology	2/4/1984-10/12/1985
ix.	Plant Morphology	2/09/2000-2/09/2003
x.	General Botany	2/4/1984-10/12/1985
xi.	Plant Embryology	2/4/1984-10/12/1985
xii.	Plants and Human Affairs	23/9/1991-7/12/1991
xiii.	Cytogenetics Lab	23/3/1991-7/6/1991

xiv.	Caccti and Succulents	1/1/1992-15/3/1992
xv.	Mycology and Plant Pathology	15/2/2001-17/7/2001
xvi.	Biodiversity	15/2/2002-17/7/2002, 15/2/2003-17/7/2003
xvii.	Molecular Plant Development	15/2/2002-17/7/2002, 15/2/2003-17/7/2004
xviii.	Research Planning and Report Writing	15/2/2003-17/7/2003, 19/9/2005-2008
xix.	Integrated Biological Resource Management	19/9/2005-2007
xx.	Diversity in Vascular Plants	2-9-200 to 19/9/2005
xxi.	Molecular Basis of Morphogenesis	2-10-2006- 20010
xxii.	Concepts of Genetics	2-10-2006- 2009
xxiii.	Principles of Genome Analysis & Genomics	5-03-2007- 2010
xxiv.	Molecular Genetics	10-03-2011 – to date
xxv.	Genomics	12-09-2011-to date
xxvi.	Advances in Biotechnology	10-02-2013- to date

## **15. COURSES AND EXPERTIES IN COMPUTER**

Word for windows, Excel, Power point, SAS, SPSS, Minitab, Pascal, Use of Data Bases for Bioinformatics research problems.

## **16. TECHNICAL SKILLS:**

- i. Light microscopy, Fluorescence microscopy, Polarizing microscopy.
- ii. Transmission electron microscopy,
- iii. Scanning electron microscopy
- iv. Confocal microscopy.
- v. SDS polyacrylamide gel electrophoresis, IEF gel electrophoresis.
- vi. Agarose gel electrophoresis of DNA, Polyacrylamide DNA sequencing gel electrophoresis.
- vii. Column chromatography, Paper chromatography, Chromatography by Rotoforcel
- viii. Tissue Culture Techniques.



- ix. Microtomy.
- x. Molecular Techniques: RNA and DNA isolation, cDNA library construction.
- xi. Immunological techniques.
- xii. Microarray techniques and data analysis
- xiii. Oligonucleotide hybridization for BAC filter screening.

#### **17. CURRENT RESEARCH INTEREST:**

The research goals are to understand the fundamental biochemical processes of genetic diversity related to tolerance to abiotic and biotic stress?" The emphasis is on the study of effect of stress adaptation in plants. That includes changes at cellular and molecular level. Transformation of stress adopted genes to improve the genomics of crops. Finally an establishment of breeding system to genetically improve the crops. Moreover I am also interested in the characterization of industrially beneficial thermophilic bacteria.

#### **18. PROFESSIONAL MEMBERSHIP/ POSITIONS AND ASSIGNMENTS:**

- Vice President, 2011 (A. J. & Kashmir), Pakistan Botanical Society
- Botanical Society of America
- Pakistan Botanical Society
- Gamma Sigma Delta Society in U.S.A.
- National Geographic Society.
- AGRICS.
- Pakistan Phytopathological Society
- Established, Department of Biotechnology in Mirpur University of Science and Technology, Mirpur during 2010-2011.
- Established Advance Studies and Research Board in Mirpur University of Science and Technology, Mirpur during 2013-2014.
- Member of the editorial committee of Pakistan Journal of Plant Sciences.
- Associate Editor of Pakistan Journal of Arid Agriculture during 2005-2008
- Associate Editor of Asian Journal of Plant Sciences during 2006-2009
- Member Syndicate, Mirpur University of Science and Technology, Mirpur
- Member, Academic Council, Mirpur University of Science and Technology, Mirpur

- Member, Board of Studies of Department of Environmental Sciences, University of Gujrat, Gujrat, Pakistan
- Member as subject specialist of the selection Board of University of Gujrat, Gujrat, Pakistan.
- Member, Board of Studies, Department of Botany, Kohat University of Science and Technology, Kohat. NWFP.
- Executive member of Academic Staff Association of University of Balochistan, Quetta during the year 1994.
- Elected member of Academic Council of University of Balochistan, Quetta during 1998-2000.
- Member, Board of Studies, Department of Biological Sciences, PMAS Arid Agriculture University, Rawalpindi during 2000-2003.
- Member, Academic Council, PMAS Arid Agriculture University, Rawalpindi from 2000- 2010.
- Member, Ph.D. admission committee in Botany, Department of Biological Sciences PMAS Arid Agriculture University, Rawalpindi during 2000-2003.
- Member, Board of Studies, Department of Botany, PMAS Arid Agriculture University, Rawalpindi during 2003-2010.
- Member, Board of Faculty, Faculty of Sciences, PMAS Arid Agriculture University, Rawalpindi during 2000-2010.
- Member, Ph.D. admission committee, Department of Botany, PMAS Arid Agriculture University, Rawalpindi during 2003-2010.

## **19. CONFERENCES AND SEMINARS:**

1. Presented paper entitled “Evaluation of antidiabetic activity of hydroalcoholic extracts of leaves of *Moringa oleifera* in drug induced diabetic rabbits” in 3<sup>rd</sup> Annual MIMIC Scientific Symposium, along with Symposium on Diabetes Mellitus held in Mohi-Ud-Din Islamic Medical College, Mirpur AJ&K from February 26<sup>th</sup> to 28<sup>th</sup> 2014
2. Presented paper entitled “Stromal cell derived Factor-1 alpha protects stem cells derived insulin producing cells from Glucotoxicity under high glucose conditions *in-vitro* and Ameliorates drug induced diabetes in rats” in 3<sup>rd</sup> Annual MIMIC Scientific Symposium, along with Symposium on Diabetes Mellitus held in Mohi-Ud-Din Islamic Medical College, Mirpur AJ&K from February 26<sup>th</sup> to 28<sup>th</sup> 2014

3. Presented paper entitled “Preparation and characterization of microparticles of Vitamin B12 (Mecobalamine) using ethyle cellulose-N50 polymer” in 3<sup>rd</sup> Annual MIMIC Scientific Symposium, along with Symposium on Diabetes Mellitus held in Mohi-Ud-Din Islamic Medical College, Mirpur AJ&K from February 26<sup>th</sup> to 28<sup>th</sup> 2014
4. Presented paper entitled “Antibiotic sensitivity profile of pathogens from urinary tract infection patients in DHQ hospital Mirpur AJK” in 3<sup>rd</sup> Annual MIMIC Scientific Symposium, along with Symposium on Diabetes Mellitus held in Mohi-Ud-Din Islamic Medical College, Mirpur AJ&K from February 26<sup>th</sup> to 28<sup>th</sup> 2014
5. Presented paper entitled “Preparation and characterization of microparticles of Vitamin B12 (Mecobalamine) using ethyle cellulose-N50 polymer” in 1<sup>st</sup> international Conference on Applied Chemical, Biological and Aquatic Sciences held in The Government College University Faisalabad, Faisalabad, Pakistan from February 18<sup>th</sup> to 20<sup>th</sup> 2014
6. Presented paper entitled “Antibiotic sensitivity profile of pathogens from urinary tract infection patients in DHQ hospital Mirpur AJK” in 1<sup>st</sup> International Conference on Applied Chemical, Biological and Aquatic Sciences in The Government college University Faisalabad, Faisalabad, Pakistan from February 18<sup>th</sup> to 20<sup>th</sup> 2014
7. Presented paper entitled “ Heterologous expression of  $\alpha$ -amylase from *Bacillus subtilis* MUST-2 in *Escherichia coli* BL-21 (Codon Plus)” in 1<sup>st</sup> International Conference on Applied Chemical, Biological and Aquatic Sciences in The Government college University Faisalabad, Faisalabad, Pakistan from February 18<sup>th</sup> to 20<sup>th</sup> 2014.
8. Presented poster entitled “ Recombinant production of  $\alpha$ -amylase from *Bacillus subtilis* MUST-2 in *Escherichia coli* BL-21 (Codon Plus)” in 12<sup>th</sup> international Conference of Pakistan Society for Biochemistry and molecular Biology held in University of the Punjab, Lahore, Pakistan from December 4<sup>th</sup> to 7<sup>th</sup> 2013.
9. Presented poster entitled “ Study of polypeptides induced by drought stress in some local varieties of barley (*Hordeum vulgare* L.)” in 12<sup>th</sup> National and 3<sup>rd</sup> International conference of Botany held in Quaid-e-Azam University, Islamabad, Pakistan from September 1<sup>st</sup> to 3<sup>rd</sup> 2012.
10. Participated in Conclave on “ Educational Linkages for Confidence building across divides” held in Dubai from June 09<sup>th</sup> -13<sup>th</sup> 2011.
11. Participated in an International Workshop on “Medicinal Plants: Conservation & Sustainable use” held in Department of Biotechnology, Quaid-i-Azam University, Islamabad, Pakistan from December 8<sup>th</sup>-10<sup>th</sup> 2011.
12. Resource person, delivered a lecture on Drought Adaptation in Some Economically Important Barley (*Hordeum vulgare* L.) genotypes in an International Seminar on Role

and Botanical Sciences in Agricultural Development at University of Agriculture Faisalabad, Pakistan on 4<sup>th</sup> November 2011.

13. Presented paper entitled “ Histopathological studies of *Xanthomonas campestris* pv. Sesami in tolerant and susceptible Sesame genotypes” in the 2<sup>nd</sup> International Conference of Plant Scientists & 11<sup>th</sup> National meeting of Plant Scientists held at GC University, Lahore, Pakistan from February 22<sup>nd</sup> -24<sup>th</sup> 2011.
14. Participated in Conclave on “ Educational Linkages in Jammu & Kashmir: Confidence building across divides” held in Istanbul, Turkey from September 19<sup>th</sup> -24<sup>th</sup> , 2010.
15. Participated in National Biotechnology Exhibition and Seminar, organized by Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore from October 20<sup>th</sup>-21<sup>st</sup> 2010.
16. Participated in 9<sup>th</sup> Biennial Conference on Advances in Biochemistry and Molecular Biology, Organized by Pakistan Society for Biochemistry and Molecular Biology held in PMAS Arid Agriculture University Rawalpindi, Pakistan from December 17-20, 2008.
17. Organized an International Conference on Biological Resources of Pakistan, Problems, success and future perspectives in the PMAS Arid Agriculture University Rawalpindi from April 25-27<sup>th</sup> 2007.
18. Participated in an International Conference on Role of Allelopathy in Sustainable Agriculture held in the PMAS Arid Agriculture University Rawalpindi from March 22<sup>nd</sup> -24<sup>th</sup> 2007.
19. Participated in an International Workshop on Women in higher education management held at Fatima Jinnah Women University, Rawalpindi, Pakistan on January 4<sup>th</sup> -5<sup>th</sup> , 2007.
20. Participated in 3<sup>rd</sup> Workshop on International Agriculture Linkage Program held on December 13<sup>th</sup> 2006 at National Agriculture Research Center, Islamabad. Pakistan.
21. Resource person, delivered a lecture on Nucleus and vacuole in a workshop on biotechnology and secondary school teachers held in PMAS Arid Agriculture University Rawalpindi Pakistan from December 05<sup>th</sup>-09<sup>th</sup> 2006.
22. Resource person, delivered a lecture on Transcriptional profiling of drought and salinity stress in some genotypes of barley (*Hordeum vulgare* L.) using mRNA Microarray Technology in a National workshop on crop improvement: conventional and biotechnological approaches held at PMAS Arid Agriculture University Rawalpindi Pakistan from August 28<sup>th</sup> -30<sup>th</sup> 2006.
23. Attended an introductory Training course on FV1000 Confocal Microscope organized and funded by Olympus Singapore PTV LTD from July 21<sup>st</sup> -30<sup>th</sup> , 2006.

24. Resource person and delivered a lecture on RNA isolation for microarray analysis in an International training workshop on biomolecular separation techniques held in PMAS Arid Agriculture University Rawalpindi Pakistan from July 10<sup>th</sup>-15<sup>th</sup> 2006.
25. Resource person and delivered a lecture on Transcriptional profiling of barley under salinity stress in a national workshop for life scientists held from April 24<sup>th</sup> -28<sup>th</sup> 2006 at Kohat University of Science and Technology, Kohat, N.W.F.P. Pakistan.
26. Resource person and delivered a lecture on Gene expression studies in some genotypes of barley (*Hordeum vulgare* L.) through high density oligonucleotide microarray in a national workshop for life scientists held from November 15<sup>th</sup> -23<sup>rd</sup> 2005 at Kohat University of Science and Technology, Kohat, N.W.F.P. Pakistan.
27. Resource person and delivered a lecture on recent advances in Plant Growth regulation in a National workshop on Plant Molecular Biology/Biotechnology for University Teachers sponsored by Higher Education Commission held in PMAS Arid Agriculture University Rawalpindi Pakistan from January 30<sup>th</sup> to February 4<sup>th</sup> 2006.
28. Presented paper entitled, “High regeneration frequency in potato a prerequisite for induction of disease resistance via genetic transformation” in 2<sup>nd</sup> National Conference of Biology held in Government College University, Lahore, organized by Biological Society of Pakistan from August 17<sup>th</sup> -19<sup>th</sup> 2005.
29. Presented paper entitled, “Induction of fungal resistance gene in potato” in 18<sup>th</sup> Federation of Asian and Oceanian Biochemists and Molecular Biologists (FAOBMB) Symposium on Genomics and Proteomics in Health and Agriculture held in University of the Punjab, Lahore from November 20<sup>th</sup>-23<sup>rd</sup> 2005.
30. Presented paper entitled, “Genetic Transformation of Potato” in 3<sup>rd</sup> International Symposium on Biotechnology held in Institute of Biotechnology and Genetic Engineering, University of Sindh, Jamshoro, Pakistan on December 15<sup>th</sup> -18<sup>th</sup> , 2005.
31. Presented poster entitled, “Detection of barley single feature polymorphisms using oligonucleotide array- potential for large scale mapping and genotyping.” in XIII International Plant and Animal Genome Conference held at San Diego, California, USA from January 15<sup>th</sup>-19<sup>th</sup> 2005.
32. Attended workshop on, “Confocal microscopy and Illuminescens” organized by the Institute of Genomics, University of California, Riverside, USA held on April 1<sup>st</sup>,2005 and April 5<sup>th</sup> 2005.
33. Attended workshop on “Gene Spring, North American West Coast User Conference” organized by Silicon Genetics in San Diego, California, USA held on October 21<sup>st</sup> - 22<sup>nd</sup> 2004.

34. Attended workshop on “New Trends in Agriculture: Progressive Farmers’ Experiences and Technologies” organized by Pir Mehr Ali Shah Arid Agriculture University Rawalpindi. Pakistan held on October 24<sup>th</sup> 2003.
35. Participated in the 4<sup>th</sup> National Conference of Plant Pathology organized by Pakistan Phytopathological Society and PMAS Arid Agriculture University Rawalpindi Pakistan held on October 14<sup>th</sup> -16<sup>th</sup> 2003.
36. Attended UNESCAP National Workshop on “Integrating Environmental considerations into Economic Policy Making Processes” organized by National Environmental Action Plan and Planning and Development Division, Ministry of Environment, Government of Pakistan held from May 6<sup>th</sup> -8<sup>th</sup> 2003.
37. Presented paper entitled, “Performance of broilers on different levels of protein.” in 23<sup>rd</sup> Pakistan Congress of Zoology ( International) held at PMAS Arid Agriculture University Rawalpindi, Pakistan from 15<sup>th</sup> -18<sup>th</sup> June 2003.
38. Presented paper entitled, “Improvrment of callus induction and plant regeneration of some local wheat cultivars of Pakistan.” in 8<sup>th</sup> National Meeting of Plant Scientists held at Karachi from July 21<sup>st</sup>-24<sup>th</sup> 2003.
39. Presented paper entitled, “Improvrment of callus induction and plant regeneration of some local wheat cultivars of Pakistan.” in 3<sup>rd</sup> International Science Conference held at Pir Mehr Ali Shah Arid Agriculture University Rawalpindi, Pakistan from April 5<sup>th</sup>-8<sup>th</sup> 2002.
40. Presented paper entitled, "Characterization of apple bark splitting disorder in Balochistan” in 7<sup>th</sup> National Meeting of Plant Scientists held at University of the Punjab, Lahore from August 4<sup>th</sup>-7<sup>th</sup> 2000.
41. Presented paper entitled, “Identification and localization of maize embryo and aleurone dehydrins.” in 7<sup>th</sup> National Chemistry Conference held at University of Balochistan. Quetta from June 2<sup>nd</sup>-4<sup>th</sup> 1996.
42. Presented paper entitled “Characterization and immunolocalization of maize dehydrins” in International Symposium on High Salinity Tolerant plants held at University of Karachi from December 12<sup>th</sup> -16<sup>th</sup> 1994.
43. Presented paper entitled, “Biochemical and structural changes in the reserve proteins of *Lupinus luteus* L. cotyledons during germination and seedling development.” in 3<sup>rd</sup> National Meeting on Plant Tissue Culture held at University of Peshawar summer camp at Baragali from August 1<sup>st</sup> -5<sup>th</sup> 1993.
44. Participated in 16<sup>th</sup> Annual Riverside symposium in plant physiology at University of California, Riverside, California, U.S.A. on plant responses to cellular dehydration during environmental stress held from January 28<sup>th</sup> -30<sup>th</sup> 1993.

45. Participated in the first California State University Electron Microscopy Colloquium held at University of California, Long Beach, California, U.S.A. and succeeded to obtain the outstanding student presentation award from on November 22<sup>nd</sup>- 23<sup>rd</sup> 1991.
46. Presented paper entitled, “Differential activities of acid phosphatase from abaxial and adaxial regions of *Lupinus luteus* L. cotyledons during germination and seedling development.” in a conference of Botanical Society of America in San Antonio, Texas, U.S.A. held from June 22<sup>nd</sup>-25<sup>th</sup> 1991.
47. Presented paper entitled, “Immunolocalization of  $\alpha$ -galactosidase in *Lupinus luteus* L. cotyledons during and after germination” in conference of Botanical Society of America in Richmond, Virginia, U.S.A. held from June 18<sup>th</sup>-22<sup>nd</sup> 1990.
48. Presented paper entitled, “Developmental changes in the cotyledons of *Lupinus luteus* L. during germination and seedling growth.” in joint conference of Canadian Botanical Society and Botanical Society of America in Toronto, Canada held from June 21<sup>st</sup>-24<sup>th</sup> 1989.

## 20. ABSTRACTS

1. Sadiq, M., **R. Asghar**. 2012. Study of polypeptides induced by drought stress in some local varieties of barley (*Hordeum vulgare* L.). 12<sup>th</sup> National and 3<sup>rd</sup> International conference of Botany held at Quaid-e-Azam University Islamabad, Pakistan from September 1<sup>st</sup> to 3<sup>rd</sup> 2012.
2. Firdous, S. S., **R. Asghar**, M.I. Haque, S. N. Afzal and S. M. Mughal 2011. Histopathological studies of *Xanthomonas campestris* pv. Sesami in tolerant and susceptible Sesame genotypes. 2<sup>nd</sup> International Conference of Plant Scientists & 11<sup>th</sup> National meeting of Plant Scientists held at G C university, Lahore, Pakistan from February 22<sup>nd</sup> -24<sup>th</sup> 2011.
3. Murtaza, G., R. Asghar and S. A. Majid. 2011. Changes in specific activity of ascorbate peroxidase during seed development of pea (*Pisum sativum* L.) treated with salicylic acid. 2<sup>nd</sup> International Conference of Plant Scientists & 11<sup>th</sup> National meeting of Plant Scientists held at G C university, Lahore, Pakistan from February 22<sup>nd</sup> -24<sup>th</sup> 2011.
4. Kausar, R. and R. Asghar. 2011. Characterization of dehydrins in local cultivars of wheat (*Triticum aestivum* L.) under drought. 2<sup>nd</sup> International Conference of Plant Scientists & 11<sup>th</sup> National meeting of Plant Scientists held at G C university, Lahore, Pakistan from February 22<sup>nd</sup> -24<sup>th</sup> 2011.
5. Kausar, R. and **R. Asghar**. 2008. Characterization of dehydrins in local cultivars of wheat (*Triticum aestivum* L.) under drought. 9<sup>th</sup> Biennial Conference on Advances in

Biochemistry and Molecular Biology, Organized by Pakistan Society for Biochemistry and Molecular Biology held in PMAS Arid Agriculture University Rawalpindi, Pakistan from December 17<sup>th</sup> -20<sup>th</sup> ,

6. Hussain, I., **R. Asghar**, A. Muhammad, S. M. S. Naqvi, H. Rashid and S. Masood. 2008. Development of resistance against fungal pathogens in potato by genetic transformation. Conference on Recent advances in agriculture biotechnology held in Islamabad by National Commission on Biotechnology from January 29<sup>th</sup> -30<sup>th</sup>.
7. Ma, Y., H. Witt, R. Noderi, F. M. You, C. X. Wang, K. Madishetty, J. T. Severson, J. Zheng, P. Condamine, **R. Asghar**, S. Wanamaker, P. Bhat, M. Moscou, E. Rodriguez, H. Walia, J. Resnik, S. Bozdog, G. J. Muehlbouer, S. Lonardi, T. J. Close and M. C. Luo. 2008. Updates on contig assembly with gene-containing BACs of Barley. XVI Annual Plant and Animal Genome Conference held in San Diego from January 12<sup>th</sup> - 16<sup>th</sup>.
8. Firdous, S. S., **R. Asghar**, M. I. Haque, and S. N. Afzal. 2007. Development of Hypersensitive response by *Xanthomonas campestris* pv. *sesami* on *Lycopersicon esculantum* L. and *Solanum tuberosum* L. leaves. 3<sup>rd</sup> international Conference on Plant Pathology held in Department of Plant Pathology, University of the Punjab. Lahore Pakistan from November 19<sup>th</sup>-21<sup>st</sup>.
9. Ma, Y., H. Witt, F. M. You, C. X. Wang, K. Madishetty, J. T. Severson, Jie Zheng, P. Condimine, **R. Asghar**, S. Mannamaker, P. Bhatt, M. Moscou, E. Rodrigous, H. Walia, J. Rasnik, S. Bozdog, G.J. Muehlbouer, S. Lonardi, T. J. Close and M. C. Luo. 2007 Contig assembly of gene-containing BACs of barley. 8<sup>th</sup> Annual Plant and Animal Genome Conference held in San Diego from January 13<sup>th</sup>-18<sup>th</sup>.
10. Akhtar, S., **R. Asghar**, Z. Yousaf and Z. Ahmed. 2007. Allelopathic effect of *Eucalyptus glabra* on the growth and development of various vegetables. International conference on Role of allelopathy in sustainable agriculture held in University of Arid Agriculture Rawalpindi from March 22<sup>nd</sup>-24<sup>th</sup>.
11. Haq, Z., Z. Yousaf and **R. Asghar**. 2007. Impacts of allelopathic potential of aqueous extracts of *Perthenium hysterophorus* Linn on germination and seedling growth of vegetables. International conference on Role of allelopathy in sustainable agriculture held in University of Arid Agriculture Rawalpindi from March 22<sup>nd</sup>-24<sup>th</sup>.
12. Zaman, B., **R. Asghar** and M. Salim. 2007. Role of Ca<sup>2+</sup> on growth of *Brassica campestris* L. and *B. Juncea* (L.) Czern & Coss under Na<sup>+</sup> stress. International conference on Biological resources of Pakistan: Problems, success and future perspectives held in University of Arid Agriculture Rawalpindi from April 25<sup>th</sup>-27<sup>th</sup>.
13. Fatima, S. A., S. Ali, **R. Asghar** and A. Arshad. 2007. Effect of halopriming on seed germination of *Helianthus annus* under saline condition. International conference on



Biological resources of Pakistan: Problems, success and future perspectives held in University of Arid Agriculture Rawalpindi from April 25<sup>th</sup>-27<sup>th</sup>.

14. Munir, S., K. Tariq, **R. Asghar** and A. Ali. 2007. Status of Calcium and Potassium in *Helianthus annuus* varieties under Sodium ion stress. International conference on Biological resources of Pakistan: Problems, success and future perspectives held in University of Arid Agriculture Rawalpindi from April 25<sup>th</sup>-27<sup>th</sup>.
15. Sadiq, M, G. Kubra, H. Rauf, **R. Asghar** and M. Mubasharah. 2007. Diversity of algal flora from few cities of Punjab, Pakistan. International conference on Biological resources of Pakistan: Problems, success and future perspectives held in University of Arid Agriculture Rawalpindi from April 25<sup>th</sup>-27<sup>th</sup>.
16. Hussain, I., A. Muhammad, Z. Chaudhary, H. Rashid, S. M. S. Naqvi and **R. Asghar**. 2006. Genetic transformation of Potato for induction of disease resistance gene through *Agrobacterium* mediated system. 4<sup>th</sup> Conference on “Scientific research Outlook & Technology “(SRO 4) and under the patronage of His Excellency president Bashar Al-Assad held at Umayyad Palace, Damascus, Syria from December 11<sup>th</sup>-14<sup>th</sup>.
17. Severson, J.T., K. Masishetty, J. Zheng, J. Xu, P. Condamine, **R. Asghar**, S. Wanamaker, P. Bhat, M. Moscou, E. Rodriguez. H. Walia, J. Resnik, H. Le, S. Bozdog, H. Witt, F. You, N. Rostoks, R. Waugh, N. Stein, R. Varshney, A. Graner, M. C. Luo, X. Cui, T. Jiang, S. Lonardi and T. J. Close. 2006. Connecting the barley genetic and physical maps for 1000 abiotic stress genes. XIV Annual Plant and Animal Genome Conference held in San Diego from January 14<sup>th</sup>-18<sup>th</sup>.
18. **Asghar, R.**, 2006. Detection of Single Featured Polymorphisms using oligonucleotide arrays in Barley (*Hordeum vulgare* L.) genotypes under drought. International symposium on Strategies for crop improvement against abiotic stresses held at Department of Botany, University of Agriculture, Faisalabad. Pakistan from September 18<sup>th</sup>-20<sup>th</sup> 2006.
19. **Asghar, R.**, X. Cui, J. Xu, P. Condamine, J. T. Severson, S. Wanamaker, N. Stein, M. Roose and T. J. Close. 2006. Detection of barley single feature polymorphism using oligonucleotide arrays in barley. 9<sup>th</sup> National Conference of Plant Scientists held at institute of Botany, University of Jamshoro, Pakistan from February 13<sup>th</sup>-15<sup>th</sup> 2006.
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