Dr. MUHAMMAD ZAHEER AHMED
ASSISTANT PROFESSOR
INSTITUTE OF SUSTAINABLE HALOPHYTE UTILIZATION (ISHU)
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MAILING ADDRESS

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DATE OF BIRTH

07th January 1982

EDUCATION

1. **Ph. D.** Botany/Plant Eco-physiology. 2012. University of Karachi, Karachi. Pakistan.
   Dissertation title: Germination Ecology of Salt Playa Halophytes from Pakistan.
2. **M. Sc.** (**Botany- Plant Ecology**). Department of Botany, University of Karachi, Pakistan
3. **B. Sc. Honors** (**Botany**). University of Karachi, Karachi, Pakistan

MAJOR RESEARCH INTEREST

1. Molecular studies to understand the salt tolerance mechanisms in halophytes
2. Halophyte Biology - Ecology and Eco-physiology studies on seed germination and growth stage

PROFESSIONAL EXPERIENCE

21st Feb. 2013-onward:	Assistant professor: Institute of Sustainable Halophyte Utilization (ISHU), University of Karachi, Karachi, Pakistan
1st Nov. 2007- 20th Feb. 2013:	Research Officer: Institute of Sustainable Halophyte Utilization (ISHU), University of Karachi, Karachi, Pakistan
1st Nov. 2004-31st Oct. 2007:	Research Assistance: HEC approved project entitled "*International Linkages of Pakistani Universities with Foreign Universities*" (16th Protocol of Pak-China Science and Technology)
1st Jan. 2004-31st Oct. 2004:	Assistance in research and teaching of various Plant Ecology-courses

SCIENTIFIC EQUIPMENTS

Real Time PCR (Roche)
DNA sequencer (ABI)
Portable Photosynthesis equipment
Atomic Absorption Spectrometer (ABI) and Flame Photometer

PROFESSIONAL SOCIETIES

2010: Pakistan Biochemistry and molecular biological Society
2006: International Society for Halophyte Utilization
2006: Pakistan Botanical Society – life time membership

MANUSCRIPT REVIEWER

Grass and Forage Science; African Journal of Biotechnology; Pakistan Journal of Botany;
Brazilian Journal of Botany

ACADEMIC AWARDS AND HONORS

2013: PSF travel grant (PSF/P&D/TG – II (927)/13) to attend 2 International Conference on Optimum Utilization of Salt Affected Ecosystems in arid regions from September 9-12, 2013 at Cairo, Egypt
2012: Assisting in edit the Book entitled "Sabkha Ecosystems Volume IV: Cash Crop Halophytes & Biodiversity Conservation" (contract signed by Springer) under the supervision of Prof. Dr. M. Ajmal Khan S.I.
2011: Research Productive Scientist Award - by PCST, Islamabad, Pakistan
2011: "Regulation of Na+ in A. lagopoides under salinity stress" Invited lecture in the workshop on "Advances in Ecophysiology of Salt Tolerance" at Institute of Sustainable Halophyte Utilization (ISHU), University of Karachi, Pakistan, (April 12-14)
2010: Research Productive Scientist Award - by PCST, Islamabad, Pakistan
2010: Received a scholarship from JSPS through "University of Tsukuba, Japan" for complete Ph.D. research work (from 01, March 2010 to June 30, 2010)
2009: Received a scholarship (split-Ph.D.) from HEC through "International linkage between University of Karachi and University of Tsukuba for complete Ph.D. research work (from 01, Sep 2008 to Aug 30, 2009)
2007: Received a shield from Prof. Dr. M. Qiaser, Dean, faculty of Science, University of Karachi for working as a member of organizing committee and "Resource person" for the HEC workshop on "Advances in Plant Ecology" (July 3-6, 2006)
2007: Assisted in editing the Book entitled "Crop and forage production using saline waters" under the supervision of Prof. Dr. M. Ajmal Khan S.I.
2006: Assisted in editing the Book entitled "Sabkha Ecosystems Volume II: West and Central Asia" (Springer Published) under the supervision of Prof. Dr. M. Ajmal Khan S.I.
2006: Assisted in editing the Book entitled "Ecophysiology of High Salinity Tolerant Plants" (Springer Published) ISBN-10 1-4020-4017-2 (HB) under the supervision of Prof. Dr. M. Ajmal Khan S.I.

SEMINARS AND CONFERENCES ATTENDED

2013: Halophytes for Food Security in Dry Lands, Qatar University, Qatar
2011: Advances in Eco physiology of Salt Tolerance, Institute of Sustainable Halophyte Utilization, University of Karachi, Pakistan
2011: 11th National Conference of Plant Scientists, Department of Botany, GC University, Lahore, Pakistan
2009: Thematic Workshop on "Laboratory Bio-safety and containment facilities" from 59 October 2009 at COMSTECH, Islamabad, Pakistan
2008: Workshop on "Bio-safety of transgenic plants" University of Tsukuba, Tsukuba Japan
2006: Conference of "National Core group in Life Sciences" from 13-14 November 2006 at Bahauddin Zakariya University, Multan, Pakistan
2006: International symposium on "Strategies for Crop Improvement against Abiotic Stresses". 18-20, Sep 2006. Department of Botany, University of Agriculture, Faisalabad, Pakistan
2006: Invited lecture on "Community Concepts and Succession" in Life Sciences- HEC Workshop on advances in Plant Ecology (July 3-6, 2006), Department of Botany, University of Karachi, Pakistan
2006: 9th National Conference of Plant Scientists, Institute of Botany, University of Sindh, Jamshoro, Pakistan
2003: 8th National Conference of Plant Scientists, Karachi University, Karachi, Pakistan

BOOK EDITED:

Halophytes for Food Security in Dry Lands, 1st Edition
Khan M.A., Boer, B., Ozturk, M., Gul, B., **Ahmed, M.Z**. 2014. Elsevier publisher; Print Book ISBN: 9780128018545

PATENTS

Ahmed, M.Z., Shimazaki, T., Kikuchi, A., Khan, M.A. and Watanabe, K.N.

1. NCBI: *Aeluropus lagopoides putative vacuolar Na+/H+ antiporter (NHX) mRNA, complete cds* (AlaNHX; GenBank: GU199336) 2010
2. NCBI: *Aeluropus lagopoides Plasma memberane Na+/H+ antiporter (SOS1), mRNA sequence* (ISHUAla-4; GenBank: GW796824.1 GI: 293626647) 2011
3. NCBI: *Aeluropus lagopoides H+-ATPase, mRNA sequence* (ISHU-Ala-3; GenBank: GW796823.1 GI: 293626646) 2011
4. NCBI: *Aeluropus lagopoides beta actin like, mRNA sequence* (ISHU-Ala-2: GenBank: GW796822.1 GI: 293626645) 2011
5. NCBI: *Aeluropus lagopoides H+-PPase (Soluble Inorganic Pyrophosphatase/ pyrophosphate Phospho-hydrolase), mRNA sequence* (ISHU-Ala-1; GW796821.1 GI: 293626644) 2011

PEER REVIEWED RESEARCH PUBLICATION

Total Impact Factor: 17.87 (JCR-2014); **Total Citation:** *114;*
RG Score: *15.77;* ***Views & downloads:*** *= > 2K;* **h-index** =5; **i10-index** = 2
https://www.researchgate.net/profile/Muhammad_Ahmed14/contributions/?ev=prf_act
http://scholar.google.com.pk/citations?user=rbMqXDkAAAAJ&hl=en

1. Ali, H., Gul, B., Adnan, M.Y., **Ahmed, M.Z**., Aziz, I., Gulzar, S., Ansari, R., Khan, M.A. 2014. NPK mediated improvement in biomass production, photosynthesis and Na+ regulation in *Panicum antitotale* under saline conditions. Pakistan Journal of Botany

2. **Ahmed, M.Z**., Gulzar, S., Khan, M.A. 2014. Role of dormancy regulating chemicals in alleviating seed germination of three playa halophytes. Ekoloji 23(92): 1-7.

3. Moinuddin M, Gulzar S, **Ahmed MZ**, Gul B, Koyro H-W, Khan MA. 2014. Excreting and non-excreting grasses exhibit different salt resistance strategies. AoB PLANTS6: plu038; doi:10.1093/aobpla/plu038

4. Abideen, Z., H.-W. Koyro, B. Huchzermeyer, **M.Z. Ahmed**, B. Gul, M.A. Khan. 2014. Moderate salinity stimulates growth and photosynthesis of *Phragmites karka* by water relations and tissue specific ion regulation. Environmental and Experimental Botany 105 (2014) 70–76

5. Hameed, A., **M.Z. Ahmed**, S. Gulzar, B. Gul, J. Alam, A.K. Hegazy, A.A. Alatar, and M.A. Khan. 2013. Seed germination and recovery responses of *Suaeda heterophylla* to abiotic stresses. Pakistan Journal of Botany 45(5): 1649-1656.

6. **Ahmed, M.Z**., T. Shimazaki, S. Gulzar, A. Kikuchi, B. Gul, M.A. Khan, H.-W. Koyro, B. Huchzermeyer and K.N. Watanabe. 2013. The influence of genes regulating transmembrane transport of Na+ on the salt resistance of *Aeluropus lagopoides*. Functional Plant Biology 40(9) 860-871.

7. **Ahmed, M.Z**., S.A. Gillani, A. Kikuchi, S. Gulzar, M.A. Khan and K.N. Watanabe. 2011. Population diversity of *A. lagopoides*: A potential cash crop for saline land. Pakistan Journal of Botany 43(1): 595-605

8. **Ahmed, M.Z**., and M.A. Khan. 2010. Seed Germination of Salt Playa Halophytes from Pakistan: Salinity, Temperature and Light Responses. Flora 205: 764-771

9. Hameed, A., **M.Z. Ahmed**, S. Gulzar and M.A. Khan. 2009. Effect of disinfectants in improving seed germination of *Suaeda fruticosa* under saline conditions. Pakistan Journal of Botany 41(5): 2639-2644

10. Hameed, A., **M.Z. Ahmed** and M.A. Khan. 2006. Comparative effects of NaCl and sea-salt on seed germination of coastal halophytes. Pakistan Journal of Botany 38(5): 1605-1612

11. Khan, M.A., **M.Z. Ahmed** and A. Hameed. 2006. Effect of sea salt and L-ascorbic acid on the seed germination of halophytes. Journal of Arid Environments 67: 535-540

RESEARCH PUBLICATION IN BOOK/PROCEEDING

1. Gulzar, S., Hameed, A., **Ahmed, M.Z**., Khan, M.A. Is soil heterogeneity the major factor influencing vegetation zonation at Karachi coast? Sabkha Ecosystems Volume IV: Cash Crop Halophytes & Biodiversity Conservation, Series: Tasks for Vegetation Science, Vol. 47, Khan, M.A., Böer, B., Öztürk, M., Al Abdessalaam, T.Z.,Clüsener-Godt, M., Gul, B. (Eds.), Pages 199-207, Springer

2. **Ahmed, M.Z**., Gul, B., Khan, M.A., Watanabe, K.N. 2014. Characterization and function of sodium exchanger genes in *Aeluropus lagopoides* under NaCl stress. Halophytes for Food Security in Dry Lands, Khan, M.A., Öztürk, M., Gul, B. Ahmed, M.Z. (Eds.), Pages xxx-xxx, Elsevier publisher (Accepted)