

## **ZAINUL ABIDEEN**

(Research Officer)

Institute of Sustainable Halophyte Utilization, University of Karachi-75270, Pakistan

### **MAILING ADDRESS**

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### **EDUCATION**

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• **Post-Doctoral Fellow** (DAAD) 2016-2017

Justus Liebig University Gießen Germany.

Adviser: Prof. Hans Werner Koyro

• **Doctorate.** Plant Ecophysiology (March 2015)

Title: Screening of coastal halophyte as a potential biofuel crop.

Adviser: Prof. Dr. M. Ajmal Khan. Institute of sustainable halophyte utilization, University of Karachi, Pakistan.

• **M. Sc.**

Botany- Plant Ecology 2006-2007.

Department of Botany, University of Karachi, Karachi, Pakistan,

### **RESEARCH EXPERIENCE**

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1. **2016** Received a postdoctoral scholarship from DAAD in Justus-Liebig-University Giessen, Germany.
2. **2013-** To date Professional experience Research Officer (BPS-17). Institute of Sustainable Halophyte Utilization, University of Karachi.
3. **2011** Received Split-PhD scholarship from HEC through "International linkage between University of Karachi and Justus-Liebig-University Giessen, Germany.
4. **2007** Received Indigenous Ph.D. Fellowship from Higher Education Commission, Pakistan.
5. **2008** Research Associate. Project title Salt induces oxidative stress consequence and possible management Funded by: Pakistan Science Foundation.

### **MAJOR RESEARCH INTERESTS**

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1. Sustainable utilization of stress resistance plants as a source of bioenergy.
2. Ecophysiology of stress resistance in salinity, drought and flooding conditions.
3. Studying on the synthesis and accumulation of different stress metabolites in plants growing under stress situations and their potential economic usages.
4. Improvement of biomass production, salinity and drought resistance in halophytes by different soil amendments.

## ***SCIENTIFIC EQUIPMENTS***

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1. LiCOR 6400 and LiCOR 8100, Portable Photosynthesis equipment with Fluorescence meter (Li-COR, USA).
2. Pulse Amplitude modulated Chlorophyll Fluorescence meter, PAM 2500 and Junior PAM. (Walz, Germany)
3. HR-33T, Wescor Dew Point micro-voltmeter (Wagtech Inc., USA).
4. Osmometer, Osmostat 030 (Germany)
5. Model 600, Plant Water Status Console (PMS Instruments, USA).
6. Expert in Quick Check hydroponic system (QCS)
7. High Performance Liquid Chromatography (HPLC)

## ***SEMINARS/CONFERENCES/WORKSHOPS***

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- **2016:** 14th National and 5th international conference of Botany, Climate change and phytodiversity: Challenges and opportunities. University of Karachi, Karachi, Pakistan. January 15-18, 2016. (Member organizing committee & Poster Presentation).
- **2016:** 4th International Conference on Environmental Horizon, Valuing and Conserving Nature. Department of Chemistry and ICCBS, University of Karachi. Karachi, Pakistan. 8-10 January. (Poster Presentation).
- **2014:** Hands on Tanning in Ecophysiological Techniques (April 12-14) at Institute of Sustainable halophyte (Member organizing committee).
- **2011:** Advances in Ecophysiology of Salt Tolerance (April 11-13) at Institute of Sustainable Halophyte Utilization, University of Karachi.
- **2010:** Workshop on "Physiological Ecology of Salt Tolerance" (April 27-29), Institute of Sustainable Halophyte Utilization, University of Karachi.
- **2008:** Workshop on Recent Trends in Plant Sciences: Impact on Biodiversity (April 16-18) organized by Institute of Sustainable Halophyte Utilization, University of Karachi, Karachi.

## ***ORIGINAL REFEREED JOURNAL ARTICLES***

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- 1 **Abideen, Z.**, Ansari, R., Khan, M.A., 2011. Halophytes: Potential source of ligno-cellulosic biomass for ethanol production. *Biomass and Bioenergy*35: 1818-1822.
- 2 **Abideen, Z.**, Koyro, H.W., Huchzermeyer, B., Ahmed, M. Z., Gul, B., & Khan, M.A. 2014. Moderate salinity stimulates growth and photosynthesis of *Phragmites karka* by water relations and tissue specific ion regulation. *Environmental and Experimental Botany* 105: 70-76.
- 3 **Abideen, Z.**, Qasim, M., Rasheed A., Adnan, M.Y., Gul, B., & Khan, MA Ajmal, M. 2015. Antioxidant activity and polyphenol content of *Phragmites karka* under saline conditions. *Pakistan Journal of Botany* 47 (3): 813-818.
- 4 Ehsen, S., Qasim, M., **Abideen, Z.**, Fatima Rizvi, R., Gul, B., Ansari, R & Khan, MA 2016. Secondary metabolites as anti-nutritional factors in locally used halophytic forage/fodder. *Pakistan Journal of Botany*48 (2): 629-636.
- 5 Qasim, M., **Abideen, Z.**, Adnan, M. Y., Ansari, R., Gul, B., & Ajmal, M. 2016. Antioxidant properties, phenolic composition, bioactive compounds and nutritive value of medicinal halophytes commonly used as herbal teas. *South African Journal of Botany*. 110, 240-250
- 6 Kumari, D., **Abideen, Z.**, Ahmad, A., Gul, B., Khan, MA. Khan, SA. 2017. Plant cell-wall degrading enzymes from indigenous fungi grown on conventional and novel natural substrates *Pakistan Journal of Botany*. 49(2), 745-750.

- 7 Ehsen, S., Fatima Rizvi R., **Abideen, Z.**, Aziz, I., Salman, G, Gul, B., Khan, MA Ansari, R. 2017. Physicochemical responses of *Zaleya pentandra* jeffrey to NaCl treatments. Pakistan Journal of Botany 49(3). 801-808.
- 8 **Abideen, Z.**, Koyro, H.W., Huchzermeyer, B., Gul, B., & Khan, M.A. 2017. Application of biochar-compost improves growth, lignocellulosic biomass and photosynthesis of *Phragmites karka* by water relation and nutrient uptake. Pedosphere 27(3). 10.1016/S1002-0160(17)60362-X.
- 9 Shoukat, E., Aziz, I., Ahmed, M. Z., **Abideen, Z.**, Khan, M.A. 2018. Growth patterns of *Phragmites karka* under saline conditions depend on the bulk elastic modulus. Crop and Pasture Science. (Accepted).
- 10 Farheen, J., Mansoor, S., Z., **Abideen.** 2018. Application of salicylic acid improved growth, photosynthetic pigments and oxidative stability in mung bean seedlings under salt stress. Pakistan Journal of Botany (Accepted).
- 11 Mahafizur Rahmanm, MD., Flory, E., Suarez C, Koyro HW., **Abideen, Z.**, Schnell, S and Cardinale, M. 2018. Stable and specific bacterial associations in the seed endosphere of barley (*Hordeum vulgare* L.) Systematic and Applied Microbiology. (Accepted).

### ***REFEREED REVIEW ARTICLES***

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1. **Abideen, Z.**, Qasim, M., Fatima Rizvi, R., Ansari, R., Gul, B., & Khan, MA 2015. Oilseed halophytes: a potential source of biodiesel using saline degraded lands. Biofuels Taylor and Francis 6 (5-6): 241-248.
2. **Abideen, Z.**, Hameed, A., Koyro, H. W, Gul, B., Ansari, R & Khan, M.A. 2014. Sustainable biofuel production from non-food sources - An overview. Emirates Journal of Food and Agriculture 26 (12): 1057-1066.
3. Qasim, M., **Abideen, Z.**, Adnan, M. Y., Ansari, R., Gul, B., & Ajmal, M. 2014. Traditional ethnobotanical uses of medicinal plants from coastal areas of. Journal of Coastal Life Medicine 2 (1): 22-30.
4. Gul, B., **Abideen, Z.**, Ansari, R., Khan, M.A. 2013. Halophytic biofuel revisited. Biofuels Taylor and Francis 4(6): 575-577.
5. **Abideen, Z.**, Ansari, R., Gul. B., Khan, M.A. 2012. The place of halophytes in the biofuel industry. Biofuels Taylor and Francis 3(2): 211-220.

### ***BOOK CHAPTER***

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- 1 Koyro, H. W., Lieth, H., Gul, B., Ansari, R., Huchzermeyer, B., **Abideen, Z.**, & Khan, M. A. 2014. Importance of the Diversity within the Halophytes to Agriculture and Land Management in Arid and Semiarid Countries. In Sabkha Ecosystems: Volume IV: Cash Crop Halophyte and Biodiversity Conservation (pp. 175-198). Springer Netherlands.

### ***RESEARCH PUBLICATIONS SUBMITTED***

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1. **Abideen, Z.**, Koyro, H.W., Huchzermeyer, B., Ahmed, M. Z., Gul, B., & Khan, M.A. 2017. Stress specific responses of *Phragmites karka* to salinity and drought. Flora Elsevier.
2. Sadaf, T., Qasim, M., **Abideen, Z.**, Rasheed, M., Gul, B., Khan, M.A., 2017. Prospects and Potentials of Seeds from Halophytic Grasses for Nutritional and Industrial Utilization. Journal of Food and Drug Analysis.

### ***IMPACT FACTOR = 20.428 & CITATION = 212***

Citation indices	All	Since 2013
Citations	213	202
h-index	8	8
i10-index	7	7

## ***LANGUAGE SKILLS***

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- German Language course (A1 and A2.2) from Goethe institute Gottingen Germany.
- Proficiency in English and Urdu language.

## ***EXTRA QUALIFICATION***

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- 2013 Graduate Assessment Test (GAT) Subject
- 2007: Graduate Assessment Test (GAT) General
- General Microsoft Office, SigmaPlot v11, SPSS 20

## ***COMPUTER SKILLS***

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- Microsoft Windows, Microsoft Office, Sigma Plot, SPSS & Internet

## ***MEMBERSHIP***

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- 2016: Alumni member of DAAD Germany
- 2016: Alumni member of Goethe-Institute Gottingen Germany
- 2015: Member of Pakistan Botanical Society
- 2006: Plant stress Group (Yahoo)

## ***MANUSCRIPT REVIEWER***

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South African Journal of Botany (*Elsevier*)  
Biofuels (*Taylor and Francis*)  
Environmental Technology (*Taylor and Francis*)  
Scientific Research and Essays

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## ***REFERENCES***

**Prof. Dr. M. Ajmal Khan,**  
Vice Chancellor,  
University of Karachi, Pakistan  
E-mail: majmalk@uok.edu.pk

**Dr. Bilquees Gul,**  
Professor and Director,  
Institute of Sustainable Halophyte  
Utilization. University of Karachi,  
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**Prof Hans Werner Koyro**  
Justus –Liebig University Giessen Germany  
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Email: [Hans-Werner.Koyro@bot2.bio.uni-giessen.de](mailto:Hans-Werner.Koyro@bot2.bio.uni-giessen.de).