

CURRICULUM VITAE

Prof. Dr. Bilquees Gul

Dean, Faculty of Science

Distinguished Scientist (PIFI)

Former Director, Office of Research, Innovation and Commercialization, and
Karachi University Business Incubation Center

Co-founder & Former Director of Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization

Lingnan Chair Professor

UNESCO Chair-holder

Member of the Pakistan Academy of Sciences

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Professional Summary

Dr. Gul has demonstrated visionary leadership and strategic management skills. As Co-founder and former Director of the Institute of Sustainable Halophyte Utilization (ISHU), she played a pivotal role in establishing and expanding a unique research institute dedicated to sustainable agriculture. Her extensive administrative experience includes serving as the HEC Focal Person, in charge of the Pakistan Qualification Register (PQR); Director of the Office of Research, Innovation, and Commercialization (ORIC); and Director of the Karachi University Business Incubation Center (KUBIC). In these roles, she has led major initiatives in academic quality assurance, research innovation, commercialization, and entrepreneurship development. Through her international affiliations with organizations such as UNESCO and COST Action, Dr. Gul has established strong collaborative networks, bridging the academic, research, and policy-making communities. She is dedicated to advancing higher education, promoting research excellence, empowering women in academia, and cultivating inclusive, innovative environments that drive societal progress. Dr. Gul has a distinguished research background on developing non-conventional crops suitable for cultivation in saline land and saline water environments. She has actively participated in various projects to utilize saline lands by cultivating alternative crops. Dr. Gul's research interests are deeply rooted in promoting climate resilience, food security, and innovative solutions for global agricultural challenges. Her exceptional contributions, along with her dedicated efforts to utilize degraded saline lands in the Thar desert of Pakistan for fodder cultivation for the betterment of the nation, are truly praiseworthy.

Education

Ph.d. Plant Ecophysiology. 1998. Brigham Young University, Provo, Utah, USA. Dissertation: Ecophysiology and population biology of the perennial halophytic shrub *Allenrolfea occidentalis* (S. Wats.) Kuntze (Chenopodiaceae) growing in a salt playa near Goshen, Utah, USA. Advisor: Dr. Darrell J. Weber.

M. Sc. Botany/Plant Ecology. 1992. University of Karachi, Karachi-75270, Pakistan. Thesis: Demography, osmoregulation, germination and seed bank dynamics of *Arthrocnemum indicum*.

Professional Societies

2023	Member Sustain Cost Action
2021	Member, International Network of Salt-Affected Soils (INSAS)
2021	Editorial Advisory Board Member in the Journal of Applied and Experimental Biology
2020	Editorial Board Member in the Journal of Salinity Management and Research, Education and Extension Organization,
2019	Advisory Board Member of the Journal of Physiological Ecology and Environmental Sciences. Bangladesh
2019	Editorial board of the International Journal of Crop Production in Harsh Environments
2017	Editorial Board of Science Alert Journals
2017	Ex-Officio Member of Sindh Sustainable Development Board under section 9 (iii) of the Sindh Environmental Protection Act-2014.
2017	Member, Promoting Science and Technology led Development in Pakistan, The Ministry of Planning, Development & Reform (MoPDR), Pakistan
2016	Member of the Technical Committee of Pakistan Science Foundation (PSF)
2015	Member, Quest4Africa
2015	Member ICARDA
2012	American Society for Microbiology (ASM)
2012	Member Non-European, COST-Action

2012	United Nations Educational, Scientific and Cultural Organization (UNESCO), -Chair-holder
2012	American Society for Biochemistry and Molecular Biology (ASBMB)
2011	Member, Pakistan Society for Biochemistry and Molecular Biology
2011	American Society of Plant Biologists (ASPB)
2007	Member, Pakistan Academy of Sciences (PAS)
2006	Member, Organization for Women in Science for the Developing World (OWSD)
2006	Member, Third World Organization for Women in Science (TWOWS)
1998	Pakistan Botanical Society (PBS) Life Member
1997	Plant Population Biologist Group
1996	Ecological Society of America (ESA)
1995	Botanical Society of America (BSA)

Professional Experience

Nov 2025	Dean, Faculty of Science, University of Karachi
2024 – 2025	PIFI Distinguished Scientist, Chinese Academy of Sciences
2022 -- 2023	Director, Office of Research, Innovation and Commercialization (ORIC) and Karachi University Business Incubation (KUBIC)
2017 -- 2023	Incharge, Pakistan Qualification Registration (PQR), HEIs Focal Person
2012 -- 2021	Director, Institute of Sustainable Halophyte Utilization, University of Karachi, Karachi.
2011 -- todate	Professor, Institute of Sustainable Halophyte Utilization, University of Karachi, Karachi.
2011 -- 2012	Visiting faculty in the Department of Microbiology and Molecular Biology, Brigham Young University, Provo, Utah, USA, worked with Prof Brent Nielson.
2009 -- 2011	Associate Professor, Institute of Sustainable Halophyte Utilization, University of Karachi,
2007 -- todate	Co-Founder, Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization, University of Karachi, Karachi
2007 -- 2009	Associate Professor, Department of Botany, University of Karachi.
2007	Postdoctoral fellow in the Department of Microbiology and Molecular Biology, Brigham Young University, Provo, Utah, USA, worked with Prof Brent Nielson
2002 -- 2007	Assistant Professor in the Department of Botany, University of Karachi.
2001 -- 2002	Full-time co-operative teacher in the Department of Botany, University of Karachi.
1998 -- 2001	Postdoctoral fellow in the Halophyte Biology Laboratory, Department of Botany, University of Karachi, on a National Science Foundation, USA research project entitled "Ecophysiological study of coastal halophytes of Pakistan"
1995 -- 1998	Graduate student and Teaching Assistant in the Department of Botany and Range Science, Brigham Young University, Provo, Utah, 84602, USA.
1993 -- 1994	Lecturer of Plant Ecology at Jinnah University for Women, Karachi. Pakistan.

Professional Activities

2023	Selected in the VIPP Exchange Program for Women Leadership entitled Aspiring Leaders Cohort (Cohort 2) of the Empowering Women in Higher Education in Pakistan program funded by the US State Department and the Higher Education Commission of Pakistan.
2020	Editorial Board Member, Journal of Salinity Management and Research, Education and Extension Organization, Iran.
2020	Editorial Board Member, Journal of Crop Production in Harsh Environments, Published by the University of Birjand.
2020	Guest editor of a special issue "Recent advances in research on halophytes from fundamental to applied aspects".
2021	Editor-in-Chief of the Book series volume 1-7 "Blue Carbon Ecosystems". Springer
2019	Founding Members of the Mekong Mangrove Forum. UNESCO Biosphere and partners
2019	Member, Promoting Science and Technology-led Development in Pakistan, The Ministry of Planning, Development & Reform (MoPDR), Pakistan.
2018	Member of the Technical Committee of Pakistan Science Foundation (PSF)
2016	Invited Speaker at the workshop on "Drylands", presenting "Food Security in drylands", 4 th Congress of Biosphere Reserves
2016	Project Evaluation Committee member, Pakistan Science Foundation (PSF), for the Natural Sciences Linkage Program (NSLP) ongoing projects in Karachi and Tandojam. Meeting at PASTIC Sub Center Karachi
2016	Chairperson, 14 th National and 5 th International Conference of Pakistan Botanical Society, "Climate Change and Phytodiversity: Challenges and Opportunities. January 15-18, 2016
2016	Co-Organizer, 14 th National and 5 th International Conference of Pakistan Botanical Society, "Climate Change and Phyto diversity: Challenges and Opportunities. January 15-18, 2016.
2016	Chairperson, 4 th International Conference of Environmental Horizon, ICEH, 2016
2016	Co-Organizer, 4 th International Conference of Environmental Horizon, ICEH, 2016.
2015	TWAS 13 th General Conference and 26 th General Meeting, Austrian Academy of Sciences (OeAW), Vienna, November 17-22, 2015.
2015	Chairperson, 2 nd International Conference on "Physiological, Biochemical and Molecular Arguments for Salt Tolerance, Qatar University. 2015.

2015	Ph.D. Supervisor External. The University of South Africa. 2015.
2015	Chairperson, Quest 4 Africa meeting, organized by UNESCO, Addis Ababa. 2015.
2014	Ex-Officio Member of Sindh Sustainable Development Board under section 9(iii) of the Sindh Environmental Protection Act-2014.
2007-2010	Ecology Sectional Head, Department of Botany, University of Karachi.
2008-2010	Member of the curriculum revision committee, Higher Education Commission of Pakistan.
2008	Chairperson, International symposium on Halophyte Utilization, Nanpi Field Station, Nanpi, China,
2008	International Linkage Program between Pakistani Universities and Foreign Universities. University of Tsukuba, Japan,
2007	International Linkage Program of Pakistani Universities with foreign universities. RIKEN, Yokohama, Japan,
2006	Chairperson, International Conference on Bio-saline Agriculture and High Salinity Tolerance, Tunisia,
2005	Chairperson, Eco-physiological section in the International Conference of Bio-saline Agriculture and High Salinity Tolerance. January (9-14, Mugla-Turkey).
2004	Chairperson of a High Saline Tolerant Plants International Symposium session, May 11-13, 2004. Brigham Young University, Provo, Utah, USA
2004	Project reviewer for South African National Research Foundation (2004- present)
2002-present	Manuscript reviewer of Pakistan Journal of Botany (2002-present), Annals of Botany, England (2004-present), Annals of Applied Botany, South Africa (2004–present), Egyptian Journal of Science
2003-2004	Joint Secretary/Pakistan Botanical Society for 2003 and 2004

Academic awards and honors

2025	Organizer of a training workshop in the Global Conference on Scientific Utilization and Development of Saline Soils and the fourth meeting of the International Network on Salt Affected Soils (INSAS), jointly organized by INSAS, FAO, China Agriculture University, the Dunhuang Municipal Government, Beautiful China Ecological and the National Technology Company. September 11-13, 2025.
2024	CAS PIFI Distinguished Scientist Award (Category A), Chinese Academy of Sciences
2024	Ranked No. 02 in the University of Karachi, No.20 all over Pakistan and No. 2355 in the world in the field of Plant Science and Agronomy on the 2023 edition of a leading academic platform for researchers Research.com .
2023	Selected in the VIPP Exchange Program for Women Leadership entitled Aspiring Leaders Cohort (Cohort 2) of the Empowering Women in Higher Education in Pakistan program funded by the US State Department and the Higher Education of Pakistan.
2022	Advisory board member of the Journal of Physiological Ecology and Environmental Science, Bangladesh
2022	Member of the Editorial Advisory Board of the Journal titled "International Journal of Applied and Experimental Biology".
2020	HEC Approved Ph. D. Supervisor
2019	Lingnan Chair Professor at Foshan University, China
2020	Atraaf-e-Khidmat Award for leading Women of the Country 2020" for the recognition and contribution of her services to the nation.
2020	Executive Council Member of the Biological Society of Pakistan
2018	Global Goodwill Ambassador Humanitarian.
2017	Ex-Officio Member of Sindh Sustainable Development Board under section 9(iii) of the Sindh Environmental Protection Act-2014.
2017	Focal Person, University of Karachi. Higher Education Commission of Pakistan
2017	HEIs PQR Focal Person, University of Karachi. Higher Education Commission of Pakistan
2015	FLORA, Certificate of Outstanding Contribution in Reviewing, in recognition of the contribution made to the journal's quality.
2015	Certificate of Appreciation on World Environment Day, UNEP
2015	Climate Change Resilience Committee Head, Quest 4 Africa, Science for Sustainable Human Living, UNESCO, Addis Ababa
2015	Co-director and Technical advisor of the research project on "Mangroves along Cameroon's Coast and Maritime Zone". African Mangrove Network
2014	FLORA, Certificate of Reviewing, in recognition of the review made for the journal.
2014	Co-Chair meeting with Dr. Gebisa Ejeta, on "Task Force on Grand Challenges", Organized by the International Board, American Society for Microbiology
2013	World Environment Day, Certificate of Appreciation, UNESCO
2012	Member Academic Council, University of Karachi
2012	Member Senate, University of Karachi
2012	UNESCO UNI/TWIN chairholder
2012	Member of the Food and Agriculture COST-Action, International Partner Countries 2011 Cash Award for Research productivity allowance(Rs . 60,000).
2011	Molecular Biology of halophytes, Postdoctoral fellowship at Brigham Young University, USA.
2007	Genomics of salt-tolerant plants, Postdoctoral fellowship at Brigham Young University, USA.
2006	2006 Member, Pakistan Academy of Sciences.

2005	Pakistan Academy of Sciences Gold Medal in Botany
2004	Cash Award of Research productivity allowance (Rs. 60,000).
2004	Ranked 30 th among biologists by Pakistan Council of Science and Technology, Islamabad in a publication entitled "Productive Scientists of Pakistan"
2003	Shakoori gold medal for best young plant biologist awarded by Pakistan Zoological Society.
2003	HEC Approved Ph. D. supervisor under the Ministry of Science and Technology Scholarship Programs.
2003	Cash Award of Research productivity allowance (Rs. 120,000).
2000	Cash Award of Research productivity allowance (Rs. 60,000).
1999	University Grants Commission, Pakistan award of "Support to Scientific Talent" Scholarship.
1998	Winter semester tuition award, Brigham Young University, Utah, USA.
1998	Botanical Science Scholarship, Brigham Young University, Utah, USA.
1997	Fall tuition award, Brigham Young University, Utah, USA.
1997	University Honour scholarship, Brigham Young University, Utah, USA.
1996	Tuition award from Brigham Young University, Utah, USA.
1995-1998	Teaching and research assistantship, Department of Botany and Range Science, Brigham Young University, Provo, Utah, USA.
1995	Botany Scholarship from the Botany and Range Science Department, Brigham Young University.
1994	Chiniote Biraderey Scholarship
1993	Infaq Foundation Scholarship

Committee Services

2023	Member SUSTAIN COST Action
2021	Member INSAS
2015	Member ICARDA
2015	Member Quest 4 Africa, Ethiopia
2014	Member of the Senate, University of Karachi
2014	Member of the Academic Council, University of Karachi
2014	SIUT volunteering activities.
2013	Reviewer, HEC Outstanding Research Awards
2013 – 2020	Program Director, Free Research Internship for O and A Level Students
2012	Member of the Senate, University of Karachi
2012	Head, Departmental Research Committee (DRC)
2012	Member, Faculty of Science, University of Karachi
2012	UNESCO environmental protection volunteering activities
2010	Member of the board of the Science Faculty, University of Karachi
2012	Member of the board of advanced studies in Botany, University of Karachi.
2012	Focal person for Botany to review projects submitted to HEC.
2008	Member of Botany Curriculum Revision Committee, HEC, Pakistan

Research Awards

2021	Research and demonstration on saline water plantation and utilization in Thar-Desert of Pakistan. PSF/CRP/18 th Protocol (06)
2019	Revealing Mechanistic Basic of Salt Secretion in halophytic grasses to improve salinity stress tolerance in cereal crops. Project under PSF-National Science Foundation, China 3 rd call. (NSFC) (Rs. 14.97 Million).
2018	Light-regulated responses of halophyte seeds. Dean Faculty of Science.
2016	ROS mediated signaling inion flux: halophytes versus crop plants. Higher Education Commission of Pakistan, (Rs. 8.9 Millions).
2015	Assessing and improving bioethanol production potential of selected halophytes, Higher Education Commission of Pakistan, (Rs. 2.38 Million)
2012	Effect of humic acid on seed germination and seedling growth of halophytes. Faculty of Science, University of Karachi. (Rs. 0.1 Millions).
2011	Building Capabilities for the Molecular and Biochemical Characterization of Photosynthesis and Oxidative Stress Gene Expression in Halophytes with Potential Use as Non-Conventional Crops. Pak-U.S. Joint Academic & Research Program, Higher Education Commission (Rs. 14.132 Millions).
2008	Proteomic studies in Mangrove under salinity stress. Higher Education Commission of Pakistan. (Rs. 3.05 Millions).
2006	Exploiting the potential of halophytes as source of edible oil. Higher Education Commission. (Rs. 3.3 Millions).
2005	Effects of potassium, magnesium and calcium of <i>Arthrocnemum macrostachyum</i> . Faculty of Science. University of Karachi. (Rs. 0.1 Millions).
2004	Influence of calcium on seed germination of <i>Arthrocnemum macrostachyum</i> under saline conditions. Faculty of Science. University of Karachi. (Rs. 0.1 Millions).

2003	Seawater tolerance of <i>Halosarchia indica</i> from Gadani Coast. Pakistan Science Foundation. (Rs. 0.24 Millions).
2002	Effect of different salts on the germination of <i>Suaeda fruticosa</i> . Faculty of Science. University of Karachi. (Rs. 0.1 Millions).

Research Supervised

Name	Year	Topic	Level
Fizza Qaiser	2022	Impact of ROS on the growth of <i>Zea mays</i> and <i>Urochondria setulosa</i> in different salinities	M.Phil
Iqra Aziz	2022	Elucidating and Contrasting the Halophytic Mechanisms of salt secreting grasses <i>Urochondra setulosa</i> and <i>Phragmites karka</i> : A Comparative Study Aimed at Enhancing Salinity Tolerance in Cereal Crops.	M.Phil
Shahla Rafiq	2022	Scavenging and Ion Flux in <i>Arthrocnemum macrostachyum</i> and <i>Spinacia oleracea</i> ; Glycophytes vs. Halophytes	M.Phil
Rabab Fatima Rizvi	2022	Ecophysiological studies of <i>Typha domingensis</i> , a potential bioenergy plant under different stress conditions.	Ph.D.
Saima Riaz	2020	Study on Improvement of Sugarcane (<i>Saccharum Officinarum</i> L.) Through In-vitro	Ph.D.
Shazia Anjum Qadri	2020	Treatments and Selection of Stress Tolerant Cell Line. Phenol profiling of heteromorphic seeds of <i>Halopyrum mucronatum</i>	Ph.D.
Noor Fatima	2020	Optimization of biomass production under stress conditions of <i>Phragmites karka</i> , a species important to bioenergy crop development.	Ph.D.
Shahjehan Jilani	2019	Photoblastic responses of halophyte seeds during germination	Ph.D.
Saba Nazir	2019	Effect of salinity on phenolic composition and antioxidant activity of halophytes	Ph.D.
Sadaf Tauqeer	2019	Chemical screening of commercially important compounds from seeds of halophytes	Ph.D.
S. Midhat Hadi	2017	Salt tolerance in <i>Salvadora persica</i>	Ph.D.
Hina Asrar	2017	Proteomics for investigating salinity stress-related proteins in <i>Desmostachya bipinnata</i> .	Ph.D.
Sonia Bano	2017	The effects of humic acid on seed germination and seedling growth of sub-tropical halophytes	Ph.D.
Sumaira Manzoor	2017	Seeds germination responses of <i>Zygophyllum propinquum</i> to different ionic, osmotic and chemical treatments	Ph.D.
Sarwat Ghulam	2016	Salt Resistance of <i>Haloepelis perfoliata</i> : a coastal salt marsh stem succulent halophyte.	Ph.D.
Aysha Rasheed	2015	Demography and seasonal ecophysiology of a leaf succulent halophyte <i>Salsola drummondii</i>	M.Sc.
Hina Asrar	2008	Alleviation of salinity-induced germination inhibition of succulent halophytes using various completed gibberellins under light and dark conditions.	M.Sc.
S.Midhat Hadi	2008	Effect of exogenous application of gibberellins on the seed germination of halophytic grasses under complete salinity stress.	M.Sc.
Faiza Khan	2006	Effect of different salt and temperature with and without calcium on the germination of <i>Aerva</i> .	M.Sc.
Sumaira Suleman	2006	Effect of different salt and temperature on the germination of <i>Zygophyllum simplex</i> .	M.Sc.
Fazila Yousuf	2006	Role of secondary metabolites to salt stress in coastal and inland halophytes.	M.Sc.
S. Zulfiqar Mehdi	2006	Screening of different halophyte seeds for the potential source of edible oil.	M.Sc.
Saba Nazir	2005	Demography and seed bank analysis of halophytes <i>Atriplex stocksii</i> , <i>Cressa cretica</i> and <i>Suaeda fruticosa</i> from inland and coastal populations.	M.Sc.
Faiza Shaikh	2003	Effect of sodium, magnesium, and potassium with and without calcium in light and dark on seed germination of <i>Urochondra setulosa</i> .	M.Sc.
Asma Khalid	2002	Population biology of coastal halophytes.	M.Sc.

Industry Linkages/Memorandum of Understandings

Agri-Kraft: 2015-2016 - MOU between Agri-Kraft Farm (AKF) and Institute of Sustainable Halophyte Utilization (ISHU): "To grow nutritious fodder crop in mass-scale under saline conditions in AFK farm near Lahore and develop appropriate feed for livestock in this area".

Sindh Engro Coal Mining Company: 2016-2015 - MOU between Sindh Engro Coal Mining Company (SECMC) and Institute of Sustainable Halophyte Utilization (ISHU), University of Karachi, Karachi, Pakistan: "Bio saline fodder plantation project at Thar Coal Mining Area, Block II".

Iqra University, Pakistan: 2017-2019 - MOU between Iqra University Karachi and Institute of Sustainable Halophyte Utilization (ISHU), University of Karachi: "Domesticating various halophyte to serve as a source of fodder, forage, biofuel, oilseeds, and medicinal plants".

Patents

NCBI: *Aeluropus lagopoides putative vacuolar Na⁺/H⁺ antiporter (NHX) mRNA, complete cds* (AlaNHX; GenBank: GU199336) 2010 Ahmed, M.Z., Shimazaki, T., Kikuchi, A., Khan, M.A., **Gul, B** and Watanabe, K.N. <http://www.ncbi.nlm.nih.gov/nuccore/272972706>; [http://srs.ebi.ac.uk/srsbin/cgi-bin/wgetz?-e+\[EMBL:GU199336\]+-newld](http://srs.ebi.ac.uk/srsbin/cgi-bin/wgetz?-e+[EMBL:GU199336]+-newld)

NCBI: *Aeluropus lagopoides Plasma memberane Na⁺/H⁺ antiporter (SOS1), mRNA sequence* (ISHU-Ala-4; GenBank: GW796824.1 GI: 293626647) 2011 Ahmed, M.Z., Shimazaki, T., Gulzar, S., Kikuchi, A., **Gul, B.**, Watanabe, K.N., Khan, M.A. <http://www.ncbi.nlm.nih.gov/nucest/GW796824.1>

NCBI: *Aeluropus lagopoides H⁺-ATPase, mRNA sequence* (ISHU-Ala-3; GenBank: GW796823.1 GI: 293626646) 2011. Ahmed, M.Z., Shimazaki, T., Gulzar, S., Kikuchi, A., **Gul, B.**, Watanabe, K.N., Khan, M.A. <http://www.ncbi.nlm.nih.gov/nucest/GW796823.1>

NCBI: *Aeluropus lagopoides beta actin like, mRNA sequence* (ISHU-Ala-2; GenBank: GW796822.1 GI: 293626645) 2011 Ahmed, M.Z., Shimazaki, T., Gulzar, S., Kikuchi, A., **Gul, B.**, Watanabe, K.N., Khan, M.A. <http://www.ncbi.nlm.nih.gov/nucest/GW796822.1>

NCBI: *Aeluropus lagopoides H⁺-PPase (Soluble Inorganic Pyrophosphatase/ pyrophosphate Phospho-hydrolase), mRNA sequence* (ISHU-Ala-1; GW796821.1 GI: 293626644) 2011 Ahmed, M.Z., Shimazaki, T., Gulzar, S., Kikuchi, A., **Gul, B.**, Watanabe, K.N., Khan, M.A. <http://www.ncbi.nlm.nih.gov/nucest/GW796821.1>

Patent No. 141125: M. A new cropping system for fodder production by using saline resources. Ajmal Khan, Haibat Ali, **Bilquees Gul** and Raziuddin Ansari

Seminar, Summer School, or Conference

- 2025 Organizer of a training workshop in the Global Conference on Scientific Utilization and Development of Saline Soils and the fourth meeting of the International Network on Salt Affected Soils (INSAS), jointly organized by INSAS, FAO, China Agriculture University, the Dunhuang Municipal Government, Beautiful China Ecological and the National Technology Company. September 11-13, 2025.
- 2025 Invited as a PIFI Distinguished National Scientist, Chinese Academy of Sciences at Xinjiang Institute of Science and Technology, Urumqi, China
- 2025 Attend a webinar organized by FAO and WASAG "Connecting global salinity hotspot methodology, halophytes and drought-resistant indigenous crops". April 03rd, 2025
- 2024 Invited as a speaker by online UNESCO discussion session to deliver a presentation on "Blue Carbon Ecosystems".
- 2023 Organizer of the training workshop for local farmers of the Thar desert entitled "Improving salinity tolerance of conventional and non-conventional crops under extreme environmental conditions". July 10-12, 2023, at SECMC, Tharparker.
- 2023 Co-Organizer of the International Conference on Sustainable Food Security Solutions under the CPEC consortium of Universities at the University of Agriculture, Faisalabad. May 29-31, 2023.
- 2023 Invited as a keynote speaker and a saline agriculture field expert in the panel discussion expert in the 2nd meeting of the International Network on salt-affected soils INSAS, Uzbekistan, May 22-26, 2023.
- 2023 Invited as a Keynote speaker at the conference on "Blue carbon ecosystems for sustainable development with special emphasis on mangrove ecosystems", held at Yokohama National University, Japan, January 11-13, 2023.
- 2022 Invited for a Keynote lecture at the University of Swat in the 5th International Conference on Advances in Biosciences: bridging the gap between Research and sustainable development goals. May 24-26, 2022.
- 2022 Invited for a Keynote lecture at the KAUST workshop for Sustainable Food Security 'Focus Session' entitled "Saline Agriculture for Sustainable Food Security in the KSA". March 14-16, 2022, at King Abdul Aziz University of Science and Technology (KAUST), Jeddah, Saudi Arabia.
- 2021 First Halofarm workshop "Soil Bioremediation and Desalinization" online 25-26 November 2021. Tunisia.
- 2021 Keynote speaker in the International Workshop on the Future of Seawater Farming & Saline Agriculture in the Kingdom of Saudi Arabia, organized by the Ministry of Environment, Water, and Agriculture, Kingdom of Saudi Arabia on 17 November 2021, in Riyadh, Kingdom of Saudi Arabia.(online)
- 2021 One day national consultative workshop on the importance of Blue Carbon in mitigating climate change in coastal areas of Pakistan. December 10th, 2021, at Marriot Hotel Islamabad. Organized by UNESCO and WWF, Islamabad. Pakistan
- 2021 Mangrove Rehabilitation in Pakistan". 50th Anniversary of UNESCO's Man & the Biosphere Programme & The International Day for the Conservation of the Mangrove Ecosystem 2021. Monday, 26 July 2021 from 13:00-14:30, Tehran.
- 2021 Conference on Bio saline agriculture in Tharparker and other arid zones of Sindh. June 5, 2021 at Shaheed Mohtarma Benazir Bhutto Complex Mithi in collaboration with the Directorate General, Agriculture Research, Sindh Agriculture Department, and the Directorate General of Pakistan Agriculture Research Council (PARC), Sindh, Karachi.
- 2021 "International Virtual Conference on Ecophysiology and sustainable use of cash crop halophytes-a tribute to Dr. Muhammad Ajmal Khan" April 06-08th, 2021. Organized by Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization (ISHU), University of Karachi.
- 2021 Prof. Dr. Muhammad Ajmal Khan Memorial Virtual Lecture Series- "Effects of chemical pollutants on marine life" by Dr. Munawar Rasheed. On the occasion of World wetland day. February 02nd, 2021. Organized by Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization (MAK-ISHU), University of Karachi.
- 2021 Prof. Dr. Muhammad Ajmal Khan Memorial Virtual Lecture Series- "eHALOPH, a database of salt-tolerant plants" by Prof. Dr. Tim Flowers. January 12th, 2021. Organized by Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization (MAKISHU), University of Karachi.

- 2020 Prof. Dr. M. Ajmal Khan Memorial International Virtual Symposium: Halophytes for Science and Society". UNESCO World Science Day for Peace and Development. November 10th, 2020. Organized by Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization (MAKISHU), University of Karachi.
- 2020 3rd Mekong Mangrove Forum – Blue carbon ecosystem conservation, restoration and sustainable utilization in the Greater Mekong Sub-region and beyond" October 1st, 2020. Organized by UNESCO and Partners. (Online at Zoom).
- 2020 An Innovative Perspective on Food Security: Halophyte Crops for the Future. Botany 2020, Virtual Botany Conference. July 27-31.
- 2020 Discussion panellist in a Webinar on COVID-19 and its relationship with nature: 'Build Back Better'. Organized by WWF Pakistan and UNESCO.
- 2020 Water and Nutrition: From Research to Action. Webinar organized by FAO. Pandemic/Epidemic Drought & Agriculture: Building Back Better. July 10, 2020.
- 2020 Program: WASAG Webinar Series No 5: Collaboration on Promoting Quinoa (Part 1). June 15, 2020.
- 2020 Water and Soil Management in Salt-Affected Areas. Webinar organized by the Food and Agriculture Organization of the United Nations and WASAG. June 02, 2020.
- 2020 Saline Agriculture Scaling up Opportunities and challenges. Webinar organized by FAO and WASAG. May 26, 2020
- 2020 Key note Speaker in a conference "Implications of Salicornia and Halophytes in Global Sustainability. Arizona State University Tempe Campus. March 5-7, 2020.
- 2019 Keynote speaker at the Belt and Road (B&R) forum, 1st of Plant Membrane Biology. April 8-10, 2019. Foshan, Guangdong, China.
- 2019 Keynote speaker at the Mekong Mangrove Network Meeting in Hanoi, Cat Ba, Vietnam, 17-21 March 2019.
- 2019 Organized the "2nd International Conference on the Sustainable Development: Halophytes for the Green Revolution", 07-09 January 2019.
- 2018 FAO and other relevant stakeholders to improve early warning information and set up an Early Warning Action (EWEA) system in Tharparker region. December 17th, 2018 at Movenpick Hotel Karachi.
- 2018 Provincial Validation workshop on GCF project "Transforming the Indus Basin with climate-resilient agriculture and climate-smart water management. April 17, 2018 at Marriot Hotel Karachi.
- 2018 Pakistan – US Science and Technology Start-up and Ideation training program. August 28-31, 2018. Dubai, UAE.
- 2018 Organized the "World Mangrove Day" in collaboration with UNESCO. 26th July
- 2018 Organized the "1st International Conference on the Sustainable Development: Halophytes for the Green Revolution", 16-19th-April 2018 at the Institute of Sustainable Halophyte Utilization, University of Karachi.
- 2018 Integration of Sustainable Development Goals (SDGs) into Agriculture and Natural Resources Management (ANR) for Provincial Planning. Two-Day Multi-Stakeholder SDG Landing Workshop, A Collaboration of Department of P&D, Sindh Government and Food & Agriculture Organization (FAO) U. N. March 20th-21st, 2018 at Movenpick Hotel Karachi.
- 2018 Validation meeting on Sindh drought management and mitigation policy. A Collaboration of the Department of P&D, Sindh Government and the Food & Agriculture Organization (FAO), UN, March 06th, 2018, at the Mövenpick Hotel Karachi.
- 2017 Strategic Management Workshop for HODs of Public Sector HEIs of Pakistan under the Modern University Governance Program from November 20-21, 2017, at the HEC Regional Center Karachi.
- 2017 Invited Speaker at the "International Symposium on High-Efficient Utilization of Saline Resources" at the Center for Agricultural Resources Research, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences. September 21-24, 2017 Shijiazhuang, Hebei, China
- 2017 Round Table Conference on "Promoting Science & Technology-led Development in Pakistan" at the Ministry of Planning, Development & Reform, Islamabad.
- 2016 Organized the "International Synergy Meeting on the Sustainable Utilization of Saline Resources In Support of United Nations Sustainable Development Goals with Special Emphasis on Renewable Energy based on Biofuels", 5-7 December 2016.
- 2016 Organized the "International Workshop on Sustainable Development and Environment Protection", December 3-4, 2016. Institute of Sustainable Halophyte Utilization, University of Karachi, Pakistan.
- 2016 Invited Speaker at the workshop on "Drylands" presenting "Food Security in Drylands", 4th Congress of Biosphere Reserves, 2016.
- 2016 Invited Speaker at the International Conference on "Major Environmental Constraints to Plants: Assessment and Reclamations". March 28-30, Government College University, Faisalabad.
- 2016 14th National and 5th International Conference of Botany – Climate Change and Phytodiversity: Challenges and Opportunities. January 15-18 2016, University of Karachi, Karachi, Pakistan.
- 2016 Co-Organizer, 4th International Conference of Environmental Horizon, ICEH, January 2016.
- 2015 Invited speaker at the 2nd International Conference on "Physiological, Biochemical and Molecular Arguments for Salt Tolerance"; October 12-14, 2015; Qatar University, Doha, Qatar.
- 2015 TWAS 13th General Conference and 26th General Meeting, Austrian Academy of Sciences (OeAW) Vienna, November 17-22, 2015.
- 2015 Horizon 2020: Building a science bridge between Europe and Pakistan. August, 19. Organized jointly by The European Union Delegation to Pakistan, Pakistan Science Foundation and University of Karachi.
- 2015 Invited Speaker, Halophyte development in view of limited freshwater availability and ISHU. Practical guide: Science and Technology Innovation in support of the United Nations 2015, Sustainable development goals on biodiversity, climate change and water. Quest 4 Africa. May 28-29, UNESCO Liaison Office, Addis Ababa, Ethiopia.
- 2014 International Conference on Creating Food Self-Sufficiency in Thar Utilizing Indigenous Groundwater Resources, September 13-14, 2014. Organized by: Dawood University of Engineering and Technology, Center for Innovation, Research, Creativity,

- Learning and Entrepreneurship (CIRCLE), Institute of Sustainable Halophyte Utilization.
- 2014 Invited to attend the American Society for Microbiology Annual Meeting. Boston, USA.
- 2014 COST FA 0901- Putting halophytes to work from genes to ecosystems brought together. April 9-10, Coimbra, Portugal.
- 2014 Invited by the ASM International office as a field expert for the IB Task Force Grant Challenges meeting. Washington DC.
- 2013 14th Asian Symposium on medicinal plants, spices and other natural products (ASOMPS-XIV).
- 2013 Halophytes: a source for natural antioxidants. 14th Asian Symposium on medicinal plants, Species and other natural products (ASOMPS-XIV).
- 2013 International Workshop on Mechanism of Plant Stress Tolerance and Sustainable Use of Saline Resources, at Agriculture Resource Research Center of Institute of Genetics and Development, Chinese Academy of Sciences. China. October 13-20, 2013.
- 2012 Utah Plant Genetics Conference. Aspen Grove, Utah, USA.
- 2012 Bioinformatics software training workshop, USA.
- 2011 Workshop on Proteomics, at the National Institute of Health (NIH), Bethesda, Maryland, USA.
- 2010 National Curriculum Revision Committee meeting in Botany at the Higher Education Commission of Pakistan, regional centre Karachi. March 1-3.
- 2009 Launching of ISAAA Brief: 39 Press Conference and Scientific Communication Workshop on implementation of the strategy for the development of Biotechnology in Pakistan. Pakistan Biotechnology Information Center (PABIC).
- 2009 Proteomics in Health and Disease. Higher Education Commission of Pakistan-COMSTECH, Thematic workshop in Frontier Technologies. August 17-20. COMSTECH Islamabad.
- 2008 Focal person, National Curriculum Revision Committee meeting in Botany at the Higher Education Commission of Pakistan, regional center, May 6-7, Lahore.
- 2008 Workshop on Recent Trends in Plant Sciences: Impact on Biodiversity. April 16-18, ISHU.
- 2008 International Conference of Bio-Asia: The Global Bio-Business Forum, Hyderabad, India, 2008.
- 2007 Invited speaker at the International Symposium on Halophyte Utilization, Nanpi Field Station, Nanpi, China.
- 2007 Invited as a guest in the International Linkage Program of Pakistani Universities with a foreign University. University of Tsukuba, Japan.
- 2007 Invited guest, International Linkage Program of Pakistani Universities with foreign University. RIKEN, Yokohama, Japan.
- 2007 Invited Speaker at Seed germination and recovery patterns of Halophytes. Brigham Young University, Provo, Utah, USA, 2007.
- 2006 International Symposium at the Department of Botany, University of Agriculture, Faisalabad.
- 2006 Invited speaker at the Workshop on the teaching of modern concepts in Plant Sciences. Kohat University of Science and Technology, June 10-14, 2006.
- 2006 Invited Speaker: Seed bank dynamics. International conference on Biosaline Agriculture and High Salinity Tolerance, Tunisia.
- 2005 Calcium-induced reversal of salinity effects on seed germination of *Urochondra setulosa*. International Conference on Biotechnology for Salinity and Drought Tolerance in Plants. 28-31 March 2005, Islamabad.
- 2005 Invited speaker at International Conference of Biosaline Agriculture and High Salinity Tolerance, January 9-14, 2005 (Mugla-Turkey).
- 2004 Sustainable halophyte utilization. Pak-China collaborative project visit to China, 15-31 December 2004.
- 2004 Sustainable halophyte utilization. Pak-China technical collaboration visit to China. June-2004
- 2004 Capacity building workshop. Annual APN IGM/SPG meeting. April, 12-14, 2004.
- 2004 Invited speaker at the Recovery responses of halophytic seeds. US-Pakistan joint workshop on the Biology of Halophytes, Provo, Utah, USA. May 2004.
- 2003 Recovery of seed germination of halophytes from high salinity and temperature stress. 8th. National Meeting of Plant Scientists, Karachi, Pakistan.
- 2001 Invited speaker: Role of temperature in affecting the salt tolerance of the halophyte seeds. International Symposium of the Halophyte Utilization and Regional Sustainable Development of Agriculture, Huanghua, China. September 2001.
- 2001 Invited lecture, on Some ecophysiological aspects of seed germination in halophytes. International Symposium of the Halophyte Utilization and Regional Sustainable Development of Agriculture, Huanghua, China.
- 2000 Poster presentation title: Salt tolerance of *Sarcobatus vermiculatus*. Pakistan Botanical Society, Lahore, Pakistan.
- 2000 Saline Agriculture: promises and prospects for future agriculture in degraded saline lands. Technology and Development in New Millennium. Karachi, Pakistan.
- 2000 Presentation on Salt Tolerance of *Salicornia rubra* from the salt playa of the Great Basin Desert. International Seminar on Prospects of Saline Agriculture, Islamabad, Pakistan.
- 2000 Invited lecture: Potential uses of *Allenrolfea occidentalis*. International Seminar on Prospects of Saline Agriculture" Islamabad.
- 1998 Poster presentation: Fatty acid composition of seeds of halophytes. International Botanical Congress, St. Louis, USA, with Dr. D.J. Weber
- 1998 Comparison of the chemical composition of *Pseudocypbellaria aurata* from South Africa and Argentina. 4th African Mycological Congress, RMC4 (Regional mycological congress), August, 1619, Nairobi, Kenya, with Dr. D.J. Weber.
- 1997 Invited speaker: Seed bank strategies of coastal populations at Arabian Sea coast. Tenth Wildland Shrub Symposium: Shrubland Ecotones. Ephraim, Utah, USA. Aug. 9 – 13, 1997.
- 1998 Population dynamics of a perennial halophyte *Allenrolfea occidentalis*. The Tenth Wildland Shrub Symposium: Shrubland Ecotones, Ephraim, Utah. August 12-14 with Dr. D.J. Weber
- 1998 Effect of salinity and temperature on the germination of dimorphic seeds of *Suaeda torreyana*. Botanical Society of America annual meeting at Baltimore, Maryland, August 2-6

- 1998 Alleviation of seed dormancy in *Allenrolfea occidentalis*. Botanical Society of America annual meeting at Baltimore, Maryland, August 2-6 with Dr. D. J. Weber.
- 1998 Effect of intra-specific competition and inundation regime on the growth of *Arthrocnemum indicum* population. 1st Annual Intermountain Paper and Poster Symposium, Logan, Utah. April 1-3
- 1998 Seed bank dynamics in a Great Basin salt playa. 1st annual intermountain paper and poster symposium, Logan, Utah. April 1-3 with Dr. D. J. Weber.
- 1998 Action of osmotica, growth regulators and nitrogenous compounds in alleviating the effect of salinity on the germination of *Allenrolfea occidentalis* seeds. 1998, student research poster presentation at College of Biology and Agriculture, Brigham Young University, Provo, USA. March 9-13 with Dr. D. J. Weber.
- 1997 Chemical components in the South African lichen, *Pseudocyphellaria aurata*. Botanical Society of America annual meeting at Montreal, Quebec, Canada, August 3-9 with Dr. D. J. Weber.
- 1997 Effect of salinity and thermoperiod on the seed germination of *Allenrolfea occidentalis* (S. Wats.) Chenopodiaceae. Botanical Society of America annual meeting at Montreal, Quebec, Canada, August 3-9 with Dr. D. J. Weber.
- 1997 Population ecology of sub-tropical coastal halophytes *Arthrocnemum indicum*. International conference on the Biology of coastal Environments. Bahrain 6-9 April
- 1997 Seed dimorphism in *Arthrocnemum indicum* from Karachi, Pakistan. Botanical Society of America annual meeting at Seattle, Washington, USA, August 6-10
- 1997 Productivity of a coastal salt marsh dominated by *Arthrocnemum indicum*. Fourth Symposium on Biogeochemistry of Wetlands, New Orleans, LA, USA, March 4-6
- 1994 Variation in productivity as affected by monsoon rains and periodic differential inundation in coastal salt marsh community. International Symposium on High Salinity Tolerant Plants, Karachi, Pakistan, December 12-16

Collaborators (last 48 months)

Poro. Dr. Miguel Clusner	(UNESCO)
Prof. Dr. Benno Boer	(UNESCO)
Prof. Dr. Brent L. Nielsen	(USA)
Prof. Dr. Hans-Werner Koyro	(Germany)
Prof. Dr. Bernhard Huchzermeyer	(Germany)
Prof. Dr. Yu Min	(China)
Prof. Dr. Segey Shabala	(Australia)
Prof. Dr. Wenxuan Mai	(China)

Technical Skill

Proficiency in Microsoft Office, Program Planning and Design, Mixed Method research
 Proficiency, Research Management and Innovation Leadership, Strategic Resource Mobilization,
 Quality Assurance and Accreditation, Data management, University-industry collaboration, C++ Computer Programming.

Reviewer of Manuscripts

Reviewed for Scientific Reports (by Nature Publishing Group), Frontiers in Plant Science, Chemosphere, Acta Botanica Hungarica, Frontiers in Plant Science, Journal of the Saudi Society of Agricultural Sciences, Arid Land Research and Management, African Journal of Biotechnology, Scientific Research and Essays, Annals of Botany; Environmental and Experimental Botany; Acta Physiologia Plantarum; Land Degradation and Development; Journal of Arid Environments; BMC Plant Biology; Biologia Plantarum; Scientia Horticulturae; Environmental Science and Pollution Research; Estuarine coastal and shelf science, Ecolind; Pakistan Journal of Botany; African Journal of Biotechnology; International Journal of Plant Sciences; Ecologia; Elsevier Editorial System (EES); Biofuels; Frontiers; Plant Biosystems;

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[Bilquees Gul \(0000-0003-3137-303X\) \(orcid.org\)](https://orcid.org/0000-0003-3137-303X)

[Bilquees Gul - Karachi University | LinkedIn](#)

<https://pk.linkedin.com/in/bilquees-gul-88779a15>

[Bilquees GUL | Professor | PhD | University of Karachi, Karachi | Institute of Sustainable Halophytes | Research profile \(researchgate.net\)](#)

[Prof. Dr. Bilquees Gul - Google Scholar](#)

[Bilquees Gul | University of Karachi - Academia.edu](#)[Gul Bilquees | OWSD](#)

[Institute of Sustainable Halophyte Utilization > Dr. Bilquees Gul](#)

[Blue Carbon Ecosystems for Sustainable Development | Editors \(springer.com\)](#)

[Bilquees Gul \(@gul_ishu\) / Twitter](#)

[Halophytes for Food Security in Dry Lands - 1st Edition \(elsevier.com\)](#)

[The Mangrove Forum – QUEST 4 ACTION \(bronso.de\)](#)

[Water Hyacinth Feasibility Study 2017.pdf \(henningschwarze.com\)](#)

[Office of Research, Innovation & Commercialization \(ORIC\) \(uok.edu.pk\)](#)

LIST OF PUBLICATIONS

Total Impact Factor: 350; Total Citations: 8069

H-index: 48, i10-index 147, RG factor 46.56

<https://scholar.google.com.pk/citations?user=6KAeb0sAAAAJ&hl=en>

https://www.researchgate.net/profile/Bilquees_Gul

Books Edited

1. Blue Carbon Ecosystems For Sustainable Development. New Book Series Seven Volumes (Vol 1, 2 And 3 In Progress). **Editor-In-Chief- Dr. Bilquees Gul**; Co-Editors; Dr. Benno Boer; Dr. Miguel Clusner; Dr. Abdul Hameed and Dr. Ronald Loughland. Springer
2. Blue Carbon Ecosystems For Sustainable Development Vol 1: Blue Carbon Ecosystems In Un Conservation Sites: Definition, Conservation, Restoration. Springer **Editor-In-Chief- Dr. Bilquees Gul**; Co-Editors: Dr. Benno Boer, Dr. Miguel Clusner, Dr. Abdul Hameed, and Dr. Ronald Loughland. Springer
3. Blue Carbon Ecosystems Contribution To End Hunger And Ensure Food Security: A Resource For Un Sdg-02. Vol. 2 (Status-Committed) **Editor-In-Chief- Dr. Bilquees Gul**; Co-Editors; Dr. Benno Boer; Dr. Miguel Clusner; Dr. Abdul Hameed and Dr. Ronald Loughland. Springer
4. Blue Carbon Ecosystems Contribution To Combat Global Climate Change: A Resource For Un Sdg-13 Vol.3 (Status-Committed). **Editor-In-Chief- Dr. Bilquees Gul**; Co-Editors; Dr. Benno Boer; Dr. Miguel Clusner; Dr. Abdul Hameed and Dr. Ronald Loughland. Springer
5. Handbook Of Halophytes. From Molecules To Ecosystems Towards Biosaline Agriculture. **Gul, B** (Co-Editor). Springer. Special Issue. "Recent Advances In Research On Halophytes: From Fundamental To Applied Aspects". Edited By Tim Flowers, Hans-Werner Koyro, Chedly Abdelly, **Bilquees Gul**, Arnould Savouré. Environmental And Experimental Botany. Elsevier.
6. **Gul, B.** Boer, M. A. Khan, M. -C. Godt, and A. Hameed (Editors), 2019. Sabkha Ecosystems: Volume VI: The Asia and Pacific, Tasks for Vegetation Science 49, Tasks for Vegetation Science 48, DOI 10.1007/978-3-319-27093-7, © Springer Science+Business Media Dordrecht 2019.
7. Khan, M. A., B. Boer, M. -C. Godt, S. Breckle, **B. Gul**, and M. Ozturk (Editors), 2016. Sabkha Ecosystems: Volume V: The Americas, Tasks for Vegetation Science 48, Tasks for Vegetation Science 48, DOI 10.1007/978-3-319-27093-7, © Springer Science+Business Media Dordrecht 2016.
8. Khan, M. A., M. Ozturk, **B. Gul**, and M.Z. Ahmed (Editors). 2015. Halophytes for Food Security in Dry Lands. Academic Press.
9. Khan, M. A., B. Boer, T. Abdelsalaam, M. -C. Godt, **B. Gul**, and M. Ozturk (Editors), 2014. Sabkha Ecosystems: Volume IV: Cash Crop Halophyte and Biodiversity Conservation, Tasks for Vegetation Science 47, DOI 10.1007/978-94-007-7411-7_26, © Springer Science+Business Media Dordrecht 2014.

Published peer-reviewed articles (In impact factor journals)

1. **Gul, Bilquees**; Ahmed, MZ; Hameed, A; Yu, Min and Shabala, S. 2025. Root-to-Shoot signaling in plant adaptation to soil salinity. Journal of Experimental Botany. (Accepted for publication).
2. Azeem A; Mai, W; **Gul Bilquees**, Rasheed A. 2025. Eco-physiological and growth responses of two halophytes to saline irrigation and soil amendments in arid conditions. BMC Plant Biology. 25(1)
3. Azeem A; Mai, W; **Gul Bilquees**, Rasheed A. 2025. Influence Of Soil Amendment Application On Growth And Yield Of Hedysarum Scoparium Fisch. Et Mey And Avena Sativa L. Under Saline Conditions In Dry-Land Regions. Plants. 14 (6) 885. (Switzerland) (4.0)
4. Azeem A; Mai, W; Ali, R; **Gul Bilquees**, Rasheed A. 2024. The Growth And Yield Response Of Sesbania To Deficit Irrigation With Brackish Water In The Thar Desert. Polish Journal Of Environmental Studies. (Poland) (1.8)
5. Hussain, Sadiq; Rasheed, Aysha; Nisar, Farah; **Gul Bilquees**; Hameed, Abdul. 2025. Redox Priming Of Seeds To Ameliorate Salinity Tolerance In Plants. Academic Press. 107-136
6. Hussain, Sadiq; Rasheed, Aysha; Nisar, Farah; **Gul Bilquees**; Hameed, Abdul. 2025. Efficacy And Mechanisms Of Seed Priming With Melatonin To Enhance Salinity Tolerance. Academic Press. 137-156.
7. Chen, Xiaohui; Wegner, Lars H; **Gul Bilquees**; Yu, Min; Shabala, Sergey. 2024. Dealing With Extremes: Insights Into Development and Operation of Salt Bladders and Glands. Critical Reviews In Plant Sciences. V43. P158-170. (6.9)

8. **Gul Bilquees**; Hameed, Abdul; Ahmed, Muhammad Zaheer; Hussain, Tabassum; Rasool, Sarwat Ghulam; Nielsen, Brent L. 2024. Thriving Under Salinity: Growth, Ecophysiology And Proteomic Insights into The Tolerance Mechanisms Of Obligate Halophyte *Suaeda fruticosa*. *Plants*. V13. P.1529. (4.0)
9. **Gul Bilquees**; Manzoor, Sumaira; Rasheed, Aysha; Hameed, Abdul; Ahmed, Muhammad Zaheer; Koyro, Hans-Werner. 2024. Salinity Stress Responses And Adaptation Mechanisms Of *Zygophyllum Propinquum*: A Comprehensive Study On Growth, Water Relations, Ion Balance, Photosynthesis, And Antioxidant Defence. *Plants*. V.13. P.3332. (4.0)
10. Hameed, Abdul; Böer, Benno; Clüsener-Godt, Miguel; **Gul Bilquees**. 2024. Sabkha Ecosystems As Blue Carbon Reserves. *Blue Carbon Mangrove Ecosystems: A Concept-Based Approach*. Springer Nature Switzerland Cham.
11. Hussain, Sadiq; Nisar, Farah; **Gul Bilquees**; Hameed, Abdul. 2024. Seed Priming With Melatonin Improved The Salinity Tolerance Of Halophytes During Early Life-Cycle Stages. *Plant Growth Regulation*. V.103. 351-368. Springer Netherlands Dordrecht.
12. Nisar, Farah; Hameed, Abdul; **Gul Bilquees**; Aziz, Irfan; Nielsen, Brent L. 2024. Insights Into The Salinity Tolerance Of The Succulent Halophyte *Arthrocnemum Macrostachyum*: Comparative Ecophysiology Of Plants From Heteromorphic Seeds. *Frontiers In Plant Science*. V.15. P.1504540. (4.1).
13. Rabab FR; Saman E and Bilquees Gul. 2023. Ecophysiological Responses of the Potential Bioenergy Halophyte *Typha Domingensis* to the Effects of Salinity. SSRN, Elsevier.
14. S Hussain, F Nisar, A Bhatt, BI Nielsen, **B Gul**, A Hameed. 2022. Redox Priming Alleviates Dormancy And Improves Salinity Tolerance Of Seeds And Seedlings Of Medicinal Halophyte *Zygophyllum Simplex L.* *Journal Of Applied Research On Medicinal And Aromatic Plants* 30, 100384. (3.40)
15. C Abdelly, T Flowers, **B Gul**, Hw Koyro, A Savouré. 2022. Recent Advances In Research On Halophytes: From Fundamental To Applied Aspects. *Environmental And Experimental Botany* 193, 104683. (5.545)
16. T Hussain, H Asrar, J Li, X Feng, **B Gul**, X Liu. 2022. The Presence Of Salts In The Leaf Exudate Improves The Photosynthetic Performance Of A Recreto-Halophyte, *Tamarix Chinensis*. *Environmental And Experimental Botany*, 104896. (7.963)
17. S Bano, MZ Ahmed, Z Abideen, M Qasim, **B Gul**, Nu Khan. 2022. Humic Acid Overcomes Salinity Barriers And Stimulates Growth Of *Urochondra Setulosa* By Altering Ion-Flux And Photochemistry. *Acta Physiologiae Plantarum* 44 (4), 1-14 1. (2.354)
18. Aysha Rasheed, Haibat Ali, **Bilquees Gul**, And Abdul Hameed. 2022. Stage-Specific Changes In Hydrogen Peroxide, Membrane Damage, And Antioxidant Defence Of A Xerohalophyte Fodder Grass *Panicum Antidotale* Under Increasing Salinity. *South African Journal Of Botany*. Doi.Org/10.1016/J.Sajb.2022.11.020 (Impact Factor: 3.111).
19. Sahar Abbas, Aysha Rasheed, Pilar Soriano, Elena Estrelles, **Bilquees Gul**, and Abdul Hameed. 2022. Moisture Content And Oxidative Damage Determine The Longevity Of The Seeds Of Potential Cash Crop Halophyte *Haloxylon stocksii*. *Plant Biosystems*, Doi: 10.1080/11263504.2022.2065378 (Impact Factor: 1.781).
20. Aysha Rasheed, Sarwat Ghulam Rasool, Pilar Soriano*, Elena Estrelles, **Bilquees Gul**, Abdul Hameed. 2022. Ecophysiological And Biochemical Responses Depicting Seed Tolerance To Salt And Water Stress In Annual And Perennial Species Of *Haloepelis* In A Frame Of Global Warming. *Life*, 12, 2020. <https://doi.org/10.3390/Life12122020> (Impact Factor: 3.253).
21. Aysha Rasheed, Hans-Werner Koyro, Abdul Hameed, and **Bilquees Gul**. 2022. Physiological Responses Of Xero-Halophyte *Salsola Drummondii* To Seasonal Alterations Of Environmental Conditions In A Salt Desert. 2022. *Ecological Research*, <https://doi.org/10.1111/1440-1730.12345> (Impact Factor: 2.056).
22. Shah, S.Z., Rasheed, A., El-Keblawy, A., Gairola, S., Phartyal, S.S., **Gul, B.** and Hameed, A., 2022. Inter-Provenance Variation In Seed Germination Response Of A Cash Crop Halophyte, *Suaeda fruticosa*, To Different Abiotic Factors. *Flora*, P.152079. (Impact Factor: 2.220).
23. S Riaz, B Naqvi, **B Gul**, T Jan. 2022. Multiplication of *Saccharum officinarum L.* CV US 633 to develop seeding material at a mass scale. *INT. J. BIOL. BIOTECH.*, 19 (2): 189-196.

24. Abdul Hameed, M. Zaheer Ahmed, Tabassum Hussain, Irfan Aziz, Niaz Ahmad, **Bilquees Gul**, Brent L. Nielsen. 2021. Effect Of Salinity Stress On Chloroplast Structure And Function. *Cells*. 6.60
25. Adnan, M.Y., Hussain, T., Ahmed, M.Z., **Gul, B.**, Khan, M.A. And Nielsen, B.L., 2021. Growth Regulation of *Desmostachya bipinnata* by Organ-Specific Biomass, Water Relations, and Ion Allocation Responses to Improve Salt Resistance. *Acta Physiologiae Plantarum*, 43(2), Pp.1-12. 2.736
26. Sarwat R, Zaheer A and **Bilquees Gul**. 2021. Altered Water Relations, Selective Nutrient Uptake, And Reduced Na⁺ Flux Make *Halopeplis Perfoliate* An Obligate Halophyte. *Turkish Journal Of Botany* 1.39
27. T Hussain, H Asrar, W Zhang, **B Gul**, X Liu. 2021. Combined Transcriptome and Proteome Analysis to Elucidate Salt Tolerance Strategies of the Halophyte *Panicum antidotale* Retz. *Frontiers in Plant Science* 12, 760589.
28. S Gulzar, T Hussain, **B Gul**, A Hameed. 2021. Photosynthetic adaptations and oxidative stress tolerance in halophytes from warm subtropical region. *Handbook of Halophytes: From Molecules to Ecosystems towards Biosaline Agriculture*.
29. MZ Ahmed, Z Abideen, I Aziz, **B Gul**. 2021. Salinity-induced changes in growth attributes, water relations, and ion flux of subtropical halophytes. *Handbook of Halophytes: From Molecules to Ecosystems towards Biosaline Agriculture*.
30. M Ali, A Mustafa, Z Abideen, B Gul. 2021. Bioenergy production from halophyte crops for sustainable development. *Energy and Environmental Security in Developing Countries*, 571-586
31. M Ahmed, M Adil, I Haq, MK Tipu, M Qasim, **B Gul**. 2021. RP-HPLC-based phytochemical analysis and diverse pharmacological evaluation of *Quercus floribunda* Lindl. ex A. Camus nuts extracts *Natural Product Research* 35 (13), 2257-2262.
32. F Nisar, **B Gul**, I Aziz, A Hameed, T Egan. 2021. Increasing salinity leads to differential growth and H₂O₂ homeostasis in plants produced from heteromorphic seeds of the succulent halophyte *Arthrocnemum indicum* *Plant Physiology and Biochemistry* 166, 225-234.
33. Hussain, T., Koyro, H.W., Zhang, W., Liu, X., **Gul, B.** and Liu, X., 2020. Low Salinity Improves Photosynthetic Performance In *Panicum Antidotale* Under Drought Stress. *Frontiers In Plant Science*, 11, P.481. 6.627
34. Muhammad, H., Qasim, M., Ikram, A., Versiani, M.A., Tahiri, I.A., Yasmeen, K., Abbasi, M.W., Azeem, M., Ali, S.T. and **Gul, B.** 2020. Antioxidant And Antimicrobial Activities Of *Ixora Coccinea* Root And Quantification Of Phenolic Compounds Using HPLC. *South African Journal Of Botany*, 135, Pp.71-79. 2.315
35. Syed Zaheer Shah, Aysha Rasheed, **Bilquees Gul**, M. Ajmal Khan and Hameed, A. 2020. Maternal Salinity Improved Vigour and Stress Tolerance Of The Seeds of Euhalophyte *Suaeda fruticosa*. *Journal of Arid Land*, <https://doi.org/10.1007/S4033020-0054-1>. 2.299
36. Ahmed, M.Z., Parveen, F., Gulzar, S., **Gul, B.** and Khan, M.A., 2020. Effects Of Chloride and Sulphate Salts On Seed Germination Of Halophytes From Dry Alpine Climate. *Journal Of Plant Nutrition*, Pp.1-12. 1.707
37. Shoukat, E., Ahmed, M.Z., Abideen, Z., Azeem, M., Ibrahim, M., **Gul, B.** and Khan, M.A., 2020. Short and long-term salinity-induced differences In Growth and tissue-specific ion Regulation Of *Phragmites Karka*. *Flora*, P.151550. 2.088
38. Asrar H, Hussain T, Qasim M, Nielsen BL, **Gul B**, and Khan MA. 2020. Salt-Induced Modulations In The Antioxidative Defence System Of *Desmostachya bipinnata*. *Plant Physiology And Biochemistry*. 147; 113-124. 4.270
39. Abideen, Z., Koyro, H.W., Huchzermeyer, B., Ansari, R., Zulfiqar, F. and **Gul, B.**, 2019. Ameliorating Effects Of Biochar On Photosynthetic Efficiency And Antioxidant Defence of *Phragmites Karka* Under Drought Stress. *Plant Biology*. 3.081
40. Muhammad H, Tahiri Ia, Qasim M, Versiani Ma, Hanif M, **Gul B**, Ali St, Ahmed S 2019. Electrochemical Determination Of Antioxidant Activity And HPLC Profiling Of Some Dry Fruits. *Monatshefte Für Chemie-Chemical Monthly*. 2019:1-9. 1.349
41. Rasool, S.G., Gulzar, S., Hameed, A., Edwards, G.E., Khan, M.A. And **Gul, B.**, 2019. Maintenance of Photosynthesis And The Antioxidant Defence Systems Have Key Roles for Survival of *Halopeplis perfoliata* (Amaranthaceae) In A Saline Environment. *Plant Biology*. 3.081.

42. Jamshed, Humaira, Hasan Salman Siddiqi, Anwar-UI-Hassan Gilani, Jamshed Arslan, Muhammad Qasim, and **Bilquees Gul**. 2019 Studies On Antioxidant, Hepatoprotective, And Vasculoprotective Potential Of *Viola Odorata* And *Wrightia Tinctoria*." *Phytotherapy Research*. 5.878
43. Diray-Arce, J., Knowles, A., Suvorov, A., O'Brien, J., Hansen, C., Bybee, S.M., **Gul, B.**, Khan, M.A. And Nielsen, B.L., 2019. Identification and Evolutionary Characterization Of Salt-Responsive Transcription Factors In The Succulent Halophyte *Suaeda fruticosa*. *Plos One*, 14(9), P.E0222940. 3.240
44. Ahmed, M., Adil, M., Haq, I.U., Tipu, M.K., Qasim, M. and **Gul, B.** 2019. RP-HPLC- Based Phytochemical Analysis And Diverse Pharmacological Evaluation Of *Quercus Floribunda* Lindl. Ex A. *Camus Nuts Extracts*. *Natural Product Research*, Pp.1-6. 2.861
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