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Name	Prof. Muhammad Naeem Shahwani	
Designation	Professor of Biotechnology / Campus Administrator, Chiltan Campus	
Research Profile	PUBLON ID: https://www.webofscience.com/wos/author/record/GWT-1485-2022	
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Vision Statement

As an academican/ researcher and administrator my vision is to screen and select existing rich human resource, particularly youth of the province, polish them with the light of education and utilize their abilities and intellect for exploiting the hidden treasures of the Balochistan in particular and Pakistan in general. I am quite sure that with this approach we will be able to achieve the momentum of development that will lead to take the province at a stage where its contribution in the field of science and technology make our beloved country Pakistan to compete with the developed World.

Research Interests

To understand the effects of environmental stress on plant membranes, using physiological, biochemical and molecular / genetic approaches. To determine how environmental stress factors

affect plant membranes. Long-term aim is to evolve abiotic stress tolerant crop plants suitable for cultivation in low rainfall areas of the World.

Area of specialization: Agriculture Biotechnology, Plant Stress Physiology, Plant Tissue Culture, Water management and conservation

Qualification

Year	Degree/Certificate	Name of the Institute/ University	Field of study
2011	PhD (Agriculture Biotechnology)	University of Glasgow, U.K.	Plant Stress Physiology
2000	MS/ Mphil	Sindh Agriculture University, Tandojam, Pakistan.	Plant Breeding and Genetics
1994	Graduation	Univ. of Agriculture, Faisalabad, Pakistan.	Plant Breeding and Genetics

Publications

ISI Indexed/ HEC Recognized

S. No	Title of Paper	Reference	National/ International	Publication year
1	Bio-sensing chips for cancer diagnosis and treatment: A new wave towards clinical innovation	Accepted in Cancer Cell Int.	International (IF: 4.1)	2022
2	Targeting androgen receptor signaling with MicroRNAs and Curcumin: a promising therapeutic approach for Prostate Cancer Prevention and intervention	Cancer Cell Int.	International (IF: 4.1)	2021
3	Influence of Biochar based Organic Fertilizers on Growth and Concentration of Heavy Metals in Tomato and Lettuce in Chromite Mine Tailings Contaminated Soil	Sarhad Journal of Agriculture	National (HEC "Y" Category)	2021
4	Influence of Silica Gel on Ion Homeostasis in Salt Stressed Wheat Varieties of Balochistan	Silicon https://doi.org/10.1007/s12633-020-00706-9	International (ISI Indexed)	2020
5	Impact of Halo priming on Four Wheat (<i>Triticum Aestivum</i> L.) Cultivars of Balochistan under Saline Conditions	Bangladesh J. Bot. 48(4): 1091-1097	International (IF: 0.21)	2019
6	Wood-Derived Bio char Influences Nutrient Use Efficiency of Heavy Metals in Spinach (<i>SPINACIA OLERACEA</i>) under groundwater and waste water irrigation	Journal of Environmental Engineering and Landscape Management 27(3): 144–152	International (IF: 2.733)	2019
7	Influence of Bio char on Yield and Heavy Metal Accumulation in Roots of Brassica Rapa under Groundwater and Wastewater Irrigation	Sarhad Journal of Agriculture 34(2): 418-427	National (HEC "Y" Category)	2018
8	Bio char influences growth performance and heavy metal	Cogent Food & Agriculture, 4: 1-12.	International (ISI Indexed)	2018

	accumulation in spinach under wastewater irrigation			
9	Synthesis of Silica Nanoparticles and their effect on priming of wheat (<i>Triticum aestivum</i> L.) under salinity stress	Biological Forum 9(1): 01-08	International (ISI Indexed)	2017
10	Seed and cone biometry of <i>Juniperus excelsa</i> from three Provenances in Balochistan	International Journal of Biosciences IJB 10 (1): 345-355,	International (ISI Indexed)	, 2017
11	Copper resistant bacteria at coal mines sorrange Balochistan	International Journal of Biosciences IJB 10 (3): 288-296	International (ISI Indexed)	, 2017
12	Amplification of Mitochondrial DNA for detection of <i>Plasmodium vivax</i> in Balochistan.	Pakistan Journal of Medical Association, 67 (5): 677-681	International (IF: 0.64)	2017
13	Prevalence of Zoonotic Tuberculosis and Brucellosis in Animals of Quetta and Pishin Districts, Balochistan.	Pakistan J. Zoology, 49 (1): 1-3	International (IF: 0.53)	2017
14	Comparative microarray data analysis of <i>Arabidopsis</i> genome during interaction with a mutualistic and a pathogenic bacteria	International Journal of Biosciences IJB 9 (4):. 281-291	International (ISI Indexed)	2016
15	Effect of various concentrations of indole butyric acid and plantation techniques on rooting performance of grapes germplasm	International Journal of Biosciences IJB 9 (6):. 393-403	International (ISI Indexed)	2016
16	Molecular Study on the Prevalence of Respiratory Mycoplasma Species in Small Ruminants of Kuchlak, District Quetta and Khanozai, District Pishin, Balochistan.	Pakistan J. Zoology, 47(2): 473-478	International (IF: 0.53)	2015
17	Detection of BCR/ABL fusion gene, hematological and cytogenetical analysis of Chronic Myeloid Leukemia patients in Quetta, Pakistan.	Asian Pac J Cancer Prev, 16 (9), 3793-3797	International (IF: 2.51)	2015
18	Eco physiology of seed germination in native and exotic labiates of Balochistan	BIOLOGIA (PAKISTAN), 60 (1): 23-29	National (HEC "Y" Category)	2014
19	Construction of expression vector pVBG2307 by adding transcription initiation and termination elements	J. App. Em. Sc., 4 (1): 1-9	National (HEC "Y" Category)	2013
20	Somatic Embryogenesis and Organogenesis from Somatic Embryonic Explants of <i>Pinus Geradiana</i> Wall. Ex LAMB	J. App. Em. Sc., 4 (1): 33-36	National (HEC "Y" Category)	2013
21	In-vitro Hybridization of Tomato (<i>Solanum lycopersicum</i> L.)	J. App. Em. Sc., 4 (2): 94-99	National (HEC "Y" Category)	2013
22	Earliness and Yield Performance of Sunflower Hybrids in Uplands of Balochistan, Pakistan	Pak. J. Bot., 45(4): 1397-1402	International (IF: 0.87)	2013

23	Stabilization of Fresh Buffalo Milk By Activating Lactoperoxidase System	The Journal of Animal and Plant Sciences, 23(1 Suppl): 90-93	International (HEC "Y" Category)	2013
24	Reproductive biotechnologies in dairy industry in Pakistan	The Journal of Animal and Plant Sciences, 22(2 Suppl.): 84-86	International (IF: 0.53)	2012
25	Comparative Genome/Proteome Analysis of Four Serotypes of Dengue Virus Using Bioinformatics Tools	J. App. Em. Sc., 3 (1): 21-24	National (HEC "Y" Category)	2012
26	Production Constraints' of Apple Production in Balochistan	J. App. Em. Sc., 1 (2): 167-173	National (HEC "Y" Category)	2006
27	Response of sunflower hybrids in Uplands of Balochistan	J. App. Em. Sc., 1 (2): 178-182	National (HEC "Y" Category)	2006
28	Tempo spatial study of the deposition of lead on Pinus eldarica. (Medw) around the road side of Quetta city	J. App. Em. Sc., 1 (2): 183-187	National (HEC "Y" Category)	2006
29	Impact of Varying Nitrogen Levels on Growth and Yield of Fennel (Foeniculum vulgare)	J. App. Em. Sc., 1 (1): 32-37	National (HEC "Y" Category)	2005
30	Effect of EM on VAM Development and Subsequent Crop Growth in Canola (Brassica Napus L.)	J. App. Em. Sc., 1 (1): 67-77	National (HEC "Y" Category)	2005
31	Hybrid vigor for grain yield and its components in maize crosses	Sarhad J. Agric	National (HEC "Y" Category)	2001
32	Hybrid Vigor for seed Cotton yield and its Components in Gossypium Hirsutum L	Sarhad J. Agric	National (HEC "Y" Category)	2001

Other Than ISI Indexed/ HEC Recognized

S. No	Title of Paper	Reference	National/ International	Publication year
1	Computational identification of six salt stress responsive genes in <i>Cynara scolymus L</i>	Pure Appl. Biol., 9(3): 1723-1736,	National	2020
2	Engineered Silica Nanoparticles and silica nanoparticles containing Controlled Release Fertilizer for drought and saline areas.	IOP Conf. Series: Materials Science and Engineering 414	International (ISI Indexed in Conference Series)	2018
3	Comparative Study of the Blood Lead Level among Outdoor and Indoor Traffic Police Sergeants in Quetta City of Pakistan	Biological Forum 10(2): 28-32	International	2018
4	Development of Novel Protocol to Al3+ Stress Tolerance at Germination Stage in Indica Rice through Statistical Approaches	Hindawi Scientific World Journal: 1-7	International	2018
5	BACTERIAL COMMUNITY PROFILES IN RHIZOSPHERE OF	INT. J. BIOL. BIOTECH., 12 (1): 11-19	International	2014

	PADDY RICE BASED ON 16S RRNA SEQUENCE ANALYSIS			
6	Impact of Phosphorus Levels on Vegetative Growth and Seed Yield of Lettuce (<i>Lactuca sativa</i> L.) Cultivars	COMU Journal of Agriculture Faculty (Turkey)	International	2013

Invited International Paper Presented in International Conferences

S. No	Title of Paper	Name of Conference	Venue	Date
1	Ethno-veterinary practices in camel and other livestock in Balochistan, Pakistan	The 5th Conference of the International Society of Camelid Research and Development (ISOCARD)	International Laâyoune, Morocco	12 th to 15 th November 2018
2	The Impact of Salt Stress on Germination, Growth and Ontogeny, of Barley (<i>Hordeum Vulagre</i> L.) Genotypes from Arid and Temperate Regions	4th International Conference and Industrial Exhibition on Dairy Science Park (DSP)	International Selçuk University- Konya, Turkey	1 st to 5 th , November 2017
3	Assessment of the primary site of thermal injury in Assessment of the Primary Site of Thermal Injury to Photosynthesis in Temperate and Tropical C3 and C4 Plants	Annual Conference of Society of Experimental Biology	International Glasgow, Scotland, UK.	1 st to 5 th , July, 2011
4	Plant Temperature Response Networks	SEB Annual Conference -	International Prague, Czech Republic	30th June to 3rd July, 2010
5	THERMO-TOLERANCE STUDIES ON BARLEY (<i>Hordeum vulgare</i> L.) VARIETIES FROM ARID AND TEMPERATE REGIONS	Food Security and Climate Change in Dry Areas ICARDA International Conference,.	International in Amman, Jordan	1 st to 4 th , February, 2010

Work Experience

S. No	From (year)	To (year)	Name of the Institution/ Organization	Position held
1.	May, 2014	Till Date	BUIITEMS	Professor, Department of Biotechnology
2.	December, 2012	May, 2014	BUIITEMS	Associate Professor, Dept. of Biotechnology
3.	December, 2004	November, 2012	BUIITEMS	Assistant Professor, Dept. of Biotechnology
4.	April, 1996	November, 2004	Agriculture Research Institute Quetta-Balochistan.	Research Officer, Directorate of Tropical Fruits.
5	April, 1995	March, 1996	Balochistan Rural Support Program (BRSP) Quetta	Subject Matter Specialist (SMS) in Bhag Nari Region of Balochistan.

Additional Responsibilities

S. No	From (year)	To (year)	Name of the Institution/ Organization	Position held
1	October, 2020	October, 2020	BUIITEMS	Dean, Faculty of Basic Sciences (FBS)
2	June, 2014	September, 2020	BUIITEMS	Director, Office of Research, Innovation and Commercialization (ORIC)
3	September, 2012	Till Date	BUIITEMS	Administrator, Chiltan Campus
4.	June, 2007	December, 2010	University of Glasgow, UK	Part-time teaching (Demonstration and Tutorials)
5.	July, 2006	May, 2007	BUIITEMS	Project Director, (BPS-19), Carnation Development Project

HEC Approved supervisor

Yes

If Yes, provide HEC URL

e.g. <http://sc.hec.gov.pk/aphds/submit.asp?supid=4894>

Research grants/ Projects

2021-2023

Research Project “Metering the aquifer using smart monitoring and data-driven approach to assist in devising adaptive groundwater management strategy in Balochistan” approved for funding of Rs. 53030,271/- (Fifty-Three Million Thirty Thousand Two Hundred Seventy-one) by Higher Education Commission of Pakistan under Local Challenge Fund (LCF) Program.

2013-2016

Research Proposal “DEVELOPMENT OF PLANT STRESS PHYSIOLOGY LABORATORY FOR SCREENING / SELECTION OF INDIGENOUS GERMPLASM OF CEREAL CROPS FROM ARID AREAS OF BALOCHISTAN FOR ABIOTIC STRESS TOLERANCE” approved for funding of 7.86 million by Higher Education Commission of Pakistan.

2012-2013

Research Project “Establishment of mushroom culture facilities for research and commercial purposes” by BUIITEMS (PKR 0.195 Million)

2006-2009

Research Project “Development of economical protocols for propagation of different varieties of carnation using tissue culture technology” funded by Higher Education Commission of Pakistan with a total cost of PKR 1.83 Million.

2003-2006

Research and developmental project “Development of olive propagation, production and processing in Balochistan” funded by Government of Balochistan, executed in directorate of tropical fruits Agriculture Research Institute Sariab Quetta and 6 other districts of Balochistan with a cost of PKR 30.00 Million.

1999-2000

Research project “Mutation breeding for enhancement of local tomato shelf life through gamma radiation” funded by World Bank, executed at vegetable botany section Agriculture Research Institute Sariab Quetta with a cost of PKR 1.20 Million.

1997-1998

Research project “Agronomic adaptation of true potato seed in uplands of Balochistan” funded by (Swiss Development Cooperation), executed at Vegetable seed farm Agriculture Research Institute Sariab Quetta (PKR 0.98 Million)

Recognitions

Merit Scholarship holder from 2007-14 from Higher Education Commission of Pakistan, for persuading studies of PhD from University of Glasgow, Scotland-UK

Top merit position holder out of 36 selected candidates as Research Officer in Agriculture department government of Balochistan, by Balochistan Provincial Public Service Commission in 1996

Merit Scholarship holder from 1990-94 from Government of Balochistan for persuading studies of BSc Hons (Agric) from University of agriculture Faisalabad-Pakistan.

Merit scholarship holder throughout academic carrier from Primary to PhD..

Experience of Working in highly Bio-secure Labs in the field of Virology and Molecular Biology

- Molecular Biology Labs at Institute of Molecular Cell and Systems Biology University of Glasgow, Scotland-UK.
- Agriculture Biotechnology Labs at National Agricultural Research Centre Park Road Islamabad.
- Virology Labs at Ayub Agriculture Research Centre-Faisalabad.
- Molecular Biology Labs at National Institute of Biotechnology and Genetic Engineering (NIBGE) Faisalabad-Pakistan.

Foreign Exposure

United Kingdom, Germany, France, Switzerland, Czech Republic, Saudi Arabia, Jordan, United Arab Emirates, Thailand, Singapore, Laos, Turkey, Qatar and Morocco.

Trainings/ Workshops/ Conferences/ Seminars Organized

3rd International Conference on Emerging Issues in Management and Economics (ICEIME) held on 27th & 28th October 2016 at Takatu campus BUIITEMS-Quetta-Pakistan.

Session on “Technologies for Electronic and Communication” in 1st Invention to Innovation Summit-Quetta organized by South Asian Triple Helix Association (SATHA), Institute of Research Promotion (IRP) and Higher Education Intuitions (HEIs) of Balochistan held on 4 & 5th May 2016, at University of Balochistan Quetta.

Training on “Research Writing Skills” from April 14th to 18th, 2015 at BUIITEMS- Quetta-Pakistan.

Training on “Professional Development Training Program” from 15th January to 10th February, 2015 at BUITEMS- Quetta-Pakistan.

“Project Formulation Workshop” on 22nd and 23rd October, 2014 at BUITEMS Quetta-Pakistan.

1st International Conference on **Biotechnology & Informatics** from April 10-12, 2006 held at Takatu campus, Balochistan University of Information Technology and Management Sciences, BUITMS- Quetta.

National Conference on **Biotechnology & Emerging Sciences** from March 15-17, 2005 held at Faculty of Biotechnology and Informatics, city campus, Balochistan University of Information Technology and Management Sciences, BUITMS-Quetta.

Trainings/ Workshops/ Conferences/ Seminars Attended

Workshop on access to “Technology for Innovation and Establishing a Technology and Innovation Support Centre (TISC) Network in Pakistan” organized by World Intellectual Property Organization (WIPO), Intellectual Property Organization (IPO) Pakistan and Higher Education Commission (HEC) of Pakistan on February 11 and 12th, 2019 at PNEC-NUST, Karachi.

ORIC Facilitation Training Workshop on 12th and 13th March 2019 at Pakistan Institute of Management (PIM) Lahore.

International Symposium on “Technology Entrepreneurship and Incubation” by National ICT R&D Fund, Higher Education Commission and the Center for Entrepreneurial Development IBA Karachi on 19th and 20th of August, 2016 at Islamabad

Indigenous On- Campus Training Program (IOT)-HEC on “Good Governance” held from 02 to 04 August, 2016 at BUITEMS Quetta

Indigenous On- Campus Training Program (IOT)-HEC on “Finance & Audit” held from 26 to 28 July 2016 at BUITEMS Quetta.

Seminar on “Living Fossils of Balochistan; A neglected Treasure” by Department of Biotechnology-BUITEMS on 01st June 2016 at BUITEMS-Quetta.

One-day seminar on “Biosafety and Quality Assurance” held on 3rd May 2016, by Department of Microbiology, BUITEMS at Takatu Campus BUITEMS Quetta.

International Training Course on “Principle & Operation of Atomic Absorption Spectroscopy” held from 15th to 17th, September 2015 at Shimadzu (Asia Pacific) Pte Ltd, Singapore.
One-day session on “Internal Compliance Procedures” for Director ORIC’s held on 12th June, 2015 by Higher Education Commission of Pakistan at NED University of Engineering and Technology, Karachi-Pakistan.

Training on Monitoring & Evaluation for Senior Managers, Lahore University of Management Sciences (LUMS) from 19th May to 22nd May, 2015 at Centre For Governance & Public Management (CGPM)-LUMS, Lahore-Pakistan.

Training on “Developing & assessing Research Proposal” held from 27th to 30th July, 2015 by Higher Education Commission of Pakistan, at the Centre of Executive Education (CEE), Institute of Business Administration, Karachi-Pakistan.

International training course on “Enhancing Communication, Presentation and Analytical Abilities of Graduate Students through Grad Course” from August 26-29, 2008 by Glasgow Grad School, at Glasgow Caledonian University, Glasgow, Scotland, United Kingdom.

International training course on “Characterization and Management of Emerging Viral Diseases in the Developing World” from November 14-18, 2006 by National Institute for Biotechnology and Genetic Engineering, Faisalabad, at Faisalabad-Pakistan.

Training course on advance techniques in plant tissue culture and biotechnology from November 03-19, 2005 by HEJ Research Institute of Chemistry, University of Karachi, at Karachi-Pakistan.

Training course on “Rangeland Co-management initiation in Balochistan” from August 12-18, 2005 by International Center for Agriculture in Dry Areas ICARDA at Arid Zone Research Centre Quetta-Pakistan.

Training in “Meristem Tip and Shoop Tip Culture Techniques” from January 31st to February 13th, 2000 by Pakistan Agriculture Research Council, at Agriculture Biotechnology Institute, NARC Islamabad-Pakistan.

International Course on “Potato Production with Emphasis on seed Production held in Pakistan” from November 2-21, 1998 by International Potato Centre and Swiss Development Cooperation CIP/SDC at Islamabad-Pakistan.

Conference on Biotechnology and Emerging Sciences from 15-17 March, 2005 at Faculty of biotechnology and informatics, city campus, Balochistan university of Information Technology and Management Sciences, BUITMS- Quetta.

International Conference on Biotechnology and Informatics from 10-12 April, 2006 at faculty of biotechnology and informatics, Takatu campus, Balochistan university of Information Technology and Management Sciences, BUITMS-Quetta.

National workshop on “Crop Improvement Conventional and Biotechnological Approaches” by University of Arid Agriculture from 28-30 August, 2006 at Rawalpindi-Pakistan

One day workshop on “Safe Handling of Household Chemicals and Pesticides” by United Nations Environment Program, on 23rd August 2003 at Agriculture Research Institute, Sariab-Quetta.

Workshop on “Basic Training Skills” by Balochistan Rural Support Program BRSP from 31st March to 4th April, 1996 at BRSP regional office Bhag Nari-Pakistan.

Training course on “Extension Workers Training” from May 22nd to July 20th, 1995 by Balochistan Rural Support Program at Quetta-Pakistan.

Membership of Professional/ Research Societies

American Water Research Association (AWRA) USA

Society of Experimental Biology, United Kingdom.

American Society of Biochemistry-USA.

National Curriculum Revision Committee (NCRC) for Crop Physiology under High Education Commission of Pakistan

Pakistan Agronomic Society of Pakistan

Membership of University Statutory Bodies

Senate-BUITEMS: From March 2018 to October 2020.

Senate-MCKRU-Sibbi, From May 2018 to November 2019.

Syndicate BUITEMS: From April 2005 to December 2006 and From March 2018 to October 2022.

Academic Council BUITEMS: March 2011 to Till Date

Advance Studies and Research Board (ASRB) BUITEMS: January 2012 to Till Date

Advisor/ Academic Research Supervision

PhD Biotechnology

1. **Ms. Ayesha Ubaid,** research topic “Effect of chitosan coated Nano fertilizers on indigenous wheat germplasm of Balochistan varieties under salt stressed conditions”. (Qualified in January, 2020)
2. **Ms. Shanaz Sher Ahmed,** (Synopsis writing up is in progress).

MS Biotechnology

1. **Mr. Waqar Saeed,** research topic “HALO-TOLERANCE ABILITY OF MAIZE HYBRID LINES GROWN UNDER HYDROPONICS CONDITION” (Qualified in 2021)
2. **Mr. Nasir Khan,** research topic “Agronomic and Physiological Characterization of Barley Germplasm under Field Conditions of Quetta” (Qualified in 2017)
3. **Ms. Sania Ashraf,** research topic “Molecular Characterization of Human Pathogenic Yeasts associated with Urinary Tract Infections” (Qualified in 2016)
4. **Mr. Muhammad Furqan,** research topic “Rooting performance of grape germplasm by using different growth regulators and plantation techniques”(Qualified in 2016)
5. **Ms. Samia Nisar,** research topic “Mitochondrial DNA amplification for the detection of Plasmodium Vivax L. in Balochistan Population”. (Qualified in 2015)
6. **Ms. Wazma Khan,** research topic “Abiotic stress tolerance in barley genotypes from different regions of Balochistan”. (Qualified in 2015)
7. **Ms. Marjana Kasi,** research topic “Effects of different substrates on the growth of hydroponically grown tomatoes”. (Qualified in 2015)
8. **Ms. Tayeba Batool,** research topic “Prevalence of zoonotic diseases (Tuberculosis and Brucellosis) in animals of Quetta district”. (Qualified in 2014)

9. **Ms. Hira Hashmi**, research topic “Polymerase chain reaction (PCR) based survey on detection of respiratory Mycoplasma Spp in goats of Kuchlak, Quetta-Balochistan”. (Qualified in 2013)