



# BUITEMS

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<b>Designation</b>	Professor/ Chairperson			
<b>Department</b>	Microbiology			
<b>Research Profile</b>	ORCID ID: <a href="https://orcid.0000-0002-6233-2057">https://orcid.0000-0002-6233-2057</a>			
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	Research Gate ID: <a href="mailto:asmak103@gmail.com">asmak103@gmail.com</a>			
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<b>Qualification</b>				
Year	Degree/Certificate	Name of the Institute/ University	Field of study	
2018	PhD	Balochistan University of Information technology, Engineering and Management Sciences, (BUITEMS) Quetta	Biotechnology and Cancer Genetics	
2009	MS(Distinction)	Balochistan University of Information technology, Engineering and Management Sciences, (BUITEMS) Quetta	Biotechnology	
1999	MSc	University of Balochistan, Quetta	Biochemistry	
1996	BSc	University of Balochistan, Quetta	Biological Sciences	
1994	Intermediate	Government Girls Degree College, Quetta	Pre-Medical	
1992	O-Level	Beacon House School System, Quetta	Science	
<b>Publications in HEC Recognized journals</b>				
S. No	Title of Paper	Name of Journal	National/ International	Publication date
1	The Effects of Different Concentrations and Combinations of Growth Regulators on the Callus Formation of Potato ( <i>Solanum tuberosum</i> ) Explants	Journal of Biological Sciences	International	2011

2	Micropropagation and Conservation of Three <i>Juniperus</i> species ( <i>cupressaceae</i> )	Pak. J. Bot., 44: 301-304, Special Issue March 2012	National	2012
3	Kidney Function Tests and Serum Electrolyte Disorders in Different Ethnic Groups of Balochistan	J. App. Em.Sc	National	2011
4	Extraction of Active Components of Aloe Vera to Treat Acne/pimple in Population of Quetta City	J. App. Em.Sc	National	2012
5	Comparative Genome/Proteome Analysis of Four Serotypes of Dengue Virus Using Bioinformatics Tools	J. App. Em.Sc	National	2012
6	Phytotoxicity of <i>Acropitilonrepens</i> ( <i>Asteraceae</i> ) and <i>Nepetapretervisa</i> ( <i>Laminaceae</i> )	J. App. Em.Sc	National	2006
7	Elemental composition of some arid environment fodder and medicinal plants Of Quetta	J Chem. Soc Pak	National	2010
8	Regulators on the Callus Formation of Potato ( <i>Solanum tubrosum</i> ) Explants	Research Journal of Biological Sciences	International	2011
9	Blooms of pollution indicator micro-alga ( <i>Synedraacus</i> ) in Northern Arabian Sea along Karachi, Pakistan	Indian Journal of Geo-Marine Sciences	International	2015
10	Prevalence of hypothyroid disease: A cross sectional study at a higher rate among young male and female population of Balochistan, Pakistan	International Journal of Biosciences IJB	International	2016
11	Effect of different application rates of organic, inorganic and farmyard manure fertilizer on <i>Zea mays</i> L., growth, and yield production	International Journal of Biosciences IJB	International	2016
12	Adaptable Technologies of arsenic removal from Drinking Water for Arsenic Hit Areas of Pakistan	J. App. Em.Sc	National	2016
13	Evaluation of seed Viability of <i>Juniperus Excelsa</i> ( <i>M.Bieb.</i> ) found in Balochistan by Tetrazolium Assay	J. App. Em.Sc	National	2016
14	In-vitro Hybridization of Tomato ( <i>Solanum lycopersicum</i> L.)	J. App. Em.Sc	National	2013

15	Seed and Cone Biometry of Juniperus Excelsa from different provenances of Balochistan	International Journal of Biosciences IJB	International	2017
16	Identification of Two Missense Mutations(p.Ile198thr&p.Ser44Arg) in TYR gene in Pakistani Families	International Journal of Biosciences IJB	International	2017
17	Leaves and Flowers Insecticidal Activity Investigation of <i>Salvia officinalis L.</i> against <i>Sitophilus oryzae L.</i>	Journal of Agriculture Faculty	International	2017
18	Biological Control of Insect Pests Using <i>Trichogramma minutum</i> as Biological Control Agent in the Vicinity of BUITEMS	Journal of Agriculture Faculty	International	2017
19	Clinical Presentation and Lifestyle Related risk factors of Breast Cancer among different Age and Ethnic groups	Indo American Journal	International	2017
20	Characterization of Micro Flora from Coal Mines of Balochistan, Pakistan	Indo American Journal	International	2017
21	Isolation and biochemical characterization of chrome resistant bacteria from soil samples of Muslim Bagh Mines	Indo American Journal	International	2018
22	Identification of Mutations in Gene BRCA1/2 in Breast Cancer Cases from Balochistan, Pakistan	Pakistan Journal of Zoology	International	2019
23	Investigation and Prevalence of Hepatitis C Virus Genotypes in Pregnant Women	Journal of Human Genetics	International	2021
24	A Disease of Motor Neuron in Pakistan.	Journal Letters in Organic Chemistry	International	2021
25	Study on Amyotrophic lateral Sclerosis: A Disease of Motor Neuron in Pakistan” Review Paper	International Journal of Pathology	International	2022
26	Mutational Studies of Gene HBB in $\beta$ -Thalassemia Patients from Balochistan	Current Trends in OMICS	HEC Recognized	2022
27	Mutational Analysis of Gene BRD2 in Patients of Juvenile. Myoclonic Epilepsy	International Journal of Pathology	International	2022

28	Microbial pollution in inland recreational freshwaters of Quetta, Pakistan.	J Water & Health.	International	2022
29	Mutational Studies of Gene HBB in $\beta$ -Thalassemia Patients from Balochistan,	Current Trends in OMICS.	HEC Recognized	2022
30	Efficacy of Cavern Isolates for Biodegradation of Synthetic Plastic	International Journal of Pathology	International	2022

#### **Paper Presented**

S. No	Title of Paper	Name of Conference	National/ International	Date
1.	Allelopathic effect of <i>Acropiltonrepens</i> , <i>Nepetapretervisa</i> and <i>Zygophylumfabago</i>	Botanical Conference, Faisalabad	National	2008
2.	Expression of CaPG Gene at Different Growth Stages of Bell Pepper Affect the Ultrastructure of Growing Fruits	International Horticultural Congress	International	2014
3.	Identification of Mutations in Gene BRCA1/2 in Breast Cancer Cases from Balochistan, Pakistan	Oral Presentation delivered at international conference on Applied Biosciences MAJU, Pakistan	International	2019
4	Breast Cancer Awareness Session	Serena Hotel Quetta	National	2019
5	Breast Cancer Awareness Session on Diagnosis, Timely Treatment and Prevention of Breast Cancer	Serena Hotel Quetta	National	2020
6	Breast Cancer Awareness session	Al-Hamd Islamic University	National	2021

#### **Books Authored/ Edited**

S. No	Name of book	Publisher	ISBN
1	Micropropagation of Ornamental Juniper	Lambert Academic Publishing (LAP), Germany (2015)	9783659786518

2	The isolation and biochemical characterization of pseudomonas aeruginosa	Lambert Academic Publishing (LAP), Germany (2017)	9783330050419
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### Work Experience

S. No	From (year)	To (year)	Name of the Institution/ Organization	Position held
1	2002	2005	Beacon House School System, Quetta	English Teacher
2	2002	2005	Beacon House School System, Quetta	IT Coordinator
3	July, 2004	Dec, 2004	Organization for Community services and development	Teacher Trainer
4	2005	2006	BUIITEMS (Under HEC)	Research Associate
5	2006	2007	BUIITEMS	Research Associate
6	2007	2010	BUIITEMS	Lecturer
7	2010	2022	BUIITEMS	Assistant Professor (BPS-19)
8	2022	Till Date	BUIITEMS	Professor/ Chairperson(BPS-21)

### Area of specialization

Human/ Cancer Genetics & Biotechnology

### Research Interest

- Supervision and development of Laboratory, maintaining of Green House.
- Working to develop protocols, sterilization, culturing, and sub culturing of different plants. Using DNA extraction, PCR, Gel electrophoresis, ELISA techniques, SDS page and HPLC.
- Member of a project for micro propagation and Cultivation of plants.
- Operating Lab equipment's such as electrical balance, pH meters, stirrer, laminar Hood flow etc.
- Conduct training for Undergraduate students/ Post Graduate students
- Over five years of experience in research of plant tissue culture, developing and supervising of Laboratory.
- Experience in Media preparation, auto calving techniques for different plants and maintaining green house.
- An eminent member of Floriculture project and American Society of
- Plant Biologists
- Successful development of protocols of Banana, Ixora and Pineapple and Junipers.

	•DNA extraction, Protein Extraction and Cell culture techniques
<b>Future Research Plans</b>	Microbial related cancers and microbial genetics
<b>HEC Approved supervisor</b>	NO
<b>If yes, provide HEC URL</b>	////////////////////////////////////
<b>Research grants/ Projects</b>	<ol style="list-style-type: none"> <li>1. Epidemiological &amp; Genetic Study of Thyroid Carcinoma in Population of Balochistan” submitted for approval at ORIC BUITEMS</li> <li>2. Established a Tissue Culture Laboratory comprising of the Project “Micropropagation of Economically Important Plants of Balochistan” funded by HEC at BUITEMS, Quetta.</li> <li>3. Comparison of ELISA and RIA techniques for the diagnosis of Hypothyroidism by detecting the level of Thyroid Stimulating Hormone (TSH), T4 and T3 in different ethnic groups of Quetta city, Funded by ORIC, BUITEMS, Quetta.</li> <li>4. Genetic Studies of Thalassemia Patients of Balochistan Origin, Funded by ORIC, BUITEMS, Quetta.</li> <li>5. Genetic Studies of Breast Cancer in Population of Balochistan, Funded by ORIC, BUITEMS, Quetta.</li> <li>6. Clinical Evaluation and Identification of mutations in gene BIRC2 (causing Lung Cancer) present on chromosome 11q22 by Sequencing. Funded by ORIC, BUITEMS.</li> <li>7. Prevalence of Unreported Genotypes of Hepatitis C Virus (HCV) In Afghan Refugees of Balochistan. Funded by BEEC, BUITEMS, Quetta</li> <li>8. Epidemiological and Genetic Study of Thyroid Carcinoma and the pathway fueling the progression of the disease in the population of Balochistan. Submitted for funding to ORIC, BUITEMS</li> </ol>
<b>Additional Information:</b>	
<p><b>Memberships:</b></p> <ol style="list-style-type: none"> <li>1. Eminent Member of Senate BUITEMS, Quetta</li> <li>2. Member of the Graduate Committee, FLS&amp;I</li> <li>3. Member of the Examination Committee, FLS&amp;I</li> <li>4. An eminent member of Floriculture project and American Society of Plant Biologists</li> </ol> <p><b>Honors and Awards:</b></p> <ol style="list-style-type: none"> <li>1. University Excellence Award for Best Teacher -2011</li> <li>2. Eminent Member of Senate BUITEMS, Quetta</li> <li>3. Member of the Graduate Committee, FLS&amp;I</li> <li>4. Member of the Examination Committee, FLS&amp;I</li> </ol>	

5. "Balochistan Youth Talent Day Award 2015" on 24th March 2015, Presented by Youth Affairs Department, Government of Balochistan.
6. Certificate of Recognition for the services & support to BUIITEMS Student Affairs" in 2013. BUIITEMS, Quetta
7. Youth Mega Event Life with Passion & Expression," held from 10 -23 March 2012, organized by Youth affairs Department Government of Balochistan.
8. Prime Minister's Fee Reimbursement Scheme, for academic year 2013-2014.
9. Certificate of Appreciation awarded for participation, contribution, and commendable performance in Balochistan Sports Festival, held on March 2015. By Major General Aftab Khan, General officer Commanding 41 Division.
10. English Language Proficiency Certificate awarded on 12th June 2008, BUIITEMS, Quetta.
11. Established a Tissue Culture Laboratory comprising of the Project "Micropropagation of Economically Important Plants of Balochistan" funded by HEC at BUIITEMS, Quetta.
12. Comparison of ELISA and RIA techniques for the diagnosis of Hypothyroidism by detecting the level of THYROID STIMULATING HORMONE (TSH), T4 and T3 in different ethnic groups of Quetta city, Funded by ORIC, BUIITEMS, Quetta.
13. Genetic Studies of Thalassemia Patients of Balochistan Origin, Funded by ORIC, BUIITEMS, Quetta.
14. Genetic Studies of Breast Cancer in Population of Balochistan, Funded by ORIC, BUIITEMS, Quetta.
15. Clinical Evaluation and Identification of mutations in gene BIRC2 (Causing Lung Cancer) present on chromosome 11q22 by Sequencing. Submitted for funding by ORIC, BUIITEMS.
16. Prevalence of Unreported Genotypes of Hepatitis C Virus (HCV) In
17. Afghan Refugees of Balochistan. Funded by BEEC, BUIITEMS, Quetta

### **Extracurricular Activities**

Book reading

Internet Browsing

An eminent member of Floriculture project and American Society of Plant Biologists. 2006-2009

SBK: Honorary Performance Certificate for Professional Competency Enhancement Program for Teachers (PCEPT) under the Project of NAHE (Phase II) organized by Higher Education Commission, Islamabad.

Conducted Orientation Session for Teachers at BUIITEMS, Quetta. 10th. November 2010.

Participated as a resource person in Professional Competency Enhancement Program for Teachers (PCEPT) under the Project of NAHE (Phase II) organized by Higher education Commission, Islamabad, at BUIITEMS, Quetta.

Coordinator of Youth Affairs Department, Youth Development Organization, Government of Balochistan. Till Date.

Completed training on Advance Techniques in plants tissue culture and biotechnology - H.E.J Research Institute of Chemistry, University of Karachi, and Karachi, Pakistan. 2006 – 2006.

Completed training on Basic molecular techniques in plant tissue culture- H.E.J Research Institute of Chemistry, University of Karachi, Karachi, Pakistan. 2008 – 2008.

Workshop on Testing & Assessment at SBKWU, Quetta from 10th to 13th November 2009

Attended 1st. International Conference on Biotechnology & Informatics, BUIITEMS, and Quetta.

Involved in research activities since December 2005 till date.

Professional Competency Enhancement Program for Teachers (PCEPT) under the Project of NAHE (Phase II) organized by Higher Education Commission, Islamabad.

3rd International Symposium-cum-Training Course on Molecular Medicine and Drug Research. 3-6 January 2011, organized by Dr. Panjwani Center for Molecular Medicine and Drug Research

(International Center for Chemical and Biological Sciences), University of Karachi, Pakistan