



**DEPARTMENT OF PHYSIOLOGY
UNIVERSITY OF KARACHI**

**SUBJECT: SUBMISSION OF SAR, ANNEXURES, PRESENTATION FOR BS POULTRY
SCIENCE**

I am enclosing here with the SAR, ppt along with the annexures and the toolkit for your ready reference for BS Poultry Science program at University of Karachi.

Warm Regards

Prof. Dr. Taseer Ahmed Khan
Chairman

Dr. Taseer Ahmed Khan
Chairman
Department of Physiology
University of Karachi

Date: _____

The Manager,
Habib Metropolitan Bank Ltd.
HBZ Plaza Branch,
Karachi.

SUBJECT : AUTHORITY TO COLLECT CHEQUE BOOK/ATM CARD

Dear Sir,

I/We authorise Mr. _____ S/o. _____ bearing CNIC
No. _____ to collect the **Cheque Book /ATM CARD/** of my / our Account No.
_____ Title _____

Kindly hand over the **ATM DEBIT CARD** on my / our behalf without any risk, responsibility and liability on part of the bank or any of its officers.

Yours Sincerely,

Account Holder's Signature

Signature of Authorized Person
To Collect Cheque Book/ATM/Debit Card

Account Holder's Name

Department of Physiology (Poultry Science)

University of Karachi

Executive Summary

The Assessment Team (AT) conducted an evaluation of the BS Poultry Program in Department of Physiology at the University of Karachi, in accordance with the National Accreditation and Equivalence Council (NAEAC) and HEC Self-Assessment Report (SAR) criteria. The assessment aimed to gauge compliance with established standards and identify areas for improvement. Dr. Hidayatullah Soomro led the evaluation team, assisted by Dr. Fazul Nabi.

General Observations:

The BS Poultry Program in Department of Physiology demonstrates compliance with NAEAC-SAR requirements, exhibiting a commitment to continual improvement. While several gaps were identified during the assessment, the department is actively addressing these to maintain alignment with NAEAC standards.

Criteria Evaluation:

Criterion 1 - Programme Mission, Objectives, and Outcomes:

The department has established institutional and departmental policies reflecting commitment to implementing, maintaining, and enhancing applicable requirements.

Criterion 2 - Curriculum Design and Organization:

The department's curriculum, approved by relevant university bodies, aligns with HEC guidelines, ensuring adherence to prescribed standards.

Criterion 3 - Laboratories and Computing Facilities:

While equipped with essential laboratory facilities, improvements are needed to enhance student learning experiences. Additionally, the department requires additional workspace to accommodate the growing program.

Criterion 4 - Student Support and Advising:

A student advisor is in place, facilitating open discussion of student concerns. However, course choices in the curriculum are lacking, necessitating guidance and academic advising to aid students in making informed decisions.

Criterion 5 - Process Control:

Documented policies govern admission criteria and student progress monitoring. Faculty recruitment and retention procedures comply with HEC recommendations, although further efforts are needed to ensure measurable program objectives.

Criterion 6 - Faculty:

The department maintains a full-time faculty, predominantly holding PhD qualifications. However, recruitment of fresh PhD faculty is necessary to bolster program strength.

Department of Physiology (Poultry Science)
University of Karachi

Criterion 7 - Institutional Facilities:

Infrastructure supports modern learning trends, although additional space and resources are required to accommodate program growth effectively.

Criterion 8 - Institutional Support:

Limited resources and inadequate grant funding have impeded departmental operations, affecting motivation and commitment levels.

Non-conformities and Corrective Actions:

Several non-conformities were identified, including issues with measurable objectives, untrained support staff, and incomplete website information. Corrective action plans have been outlined, focusing on staff training, budget allocation, and improved communication channels.

Conclusion:

The BS Poultry Program in Department of Physiology at the University of Karachi exhibits compliance with NAEAC-SAR standards, with ongoing efforts to address identified gaps. However, challenges such as resource constraints and incomplete facilities persist, requiring proactive measures and collaborative efforts to ensure program excellence and sustainability.

This executive summary provides a comprehensive overview of the Assessment Team's findings, highlighting both strengths and areas for improvement within the BS Poultry Program in Department of Physiology.



Prof. Dr. Taseer Ahmed Khan
Chairperson
Department of Physiology
Chairman
Department of Physiology
University of Karachi



Directorate
of Quality Enhancement Cell (QEC)

Department of Physiology (Poultry Science)
University of Karachi

**Action Plan with implemental timeline for BS Poultry Program in the
Department of Physiology, University of Karachi**

1. Measurable Objectives Enhancement:

- Conduct training sessions for faculty members on defining and implementing measurable objectives aligned with program goals.
- Establish a framework for assessing and revising objectives periodically to ensure relevance and effectiveness.
- Target Date: Within 1 year

2. Support Staff Training and Recruitment:

- Provide training programs for existing support staff to enhance their skills and effectiveness in laboratory operations.
- Advocate for budget allocation to hire competent support staff, addressing financial constraints.
- Target Date: Within 1 year

3. Website Information Completion:

- Communicate with the KU IT department to address incomplete information on the department's website, including course scheme, degree passing criteria, and faculty profiles.
- Ensure timely updates and improvements to reflect accurate program details.
- Target Date: Within 6 months

4. Renovation and Access to Computer Facilities:

- Intensify follow-up efforts to expedite the completion of computer lab renovation, ensuring accessibility for students.
- Collaborate with relevant university authorities to secure necessary budget allocations for infrastructure improvements.
- Target Date: Within 1 year

5. Multimedia Installation in Classrooms:

- Pursue aggressive follow-up actions to obtain approvals for multimedia installations in classrooms lacking such facilities.
- Address budget constraints through internal discussions and advocacy for necessary funding.
- Target Date: Within 1 year

6. Resource Provision Improvement:

- Continuously engage in follow-up activities to expedite approvals for essential resources, including chemicals, research labs, and equipment.
- Advocate for increased budget allocations and timely decision-making processes to address resource shortages.
- Target Date: Within 1 year

7. Industry Collaboration for Infrastructure Support:

- Initiate dialogue with industry stakeholders to explore opportunities for supporting the establishment of essential infrastructure, such as feed mills and hatcheries.
 - Advocate for industry partnerships to mitigate the high costs associated with infrastructure development.
 - Target Date: Within 1 year
-

Department of Physiology (Poultry Science)
University of Karachi

8. Continuous Monitoring and Evaluation:

- Establish a monitoring and evaluation mechanism to track progress on action plan implementation.
- Conduct periodic reviews to assess effectiveness, identify bottlenecks, and adjust strategies accordingly.
- Target Date: Ongoing

9. Stakeholder Engagement and Communication:

- Foster transparent communication channels between the Department of Physiology, QEC UOK, faculty members, students, and relevant stakeholders.
- Solicit feedback and input from all stakeholders to inform decision-making and enhance program effectiveness.
- Target Date: Ongoing

10. Capacity Building and Professional Development:

- Facilitate opportunities for faculty members to engage in capacity-building activities, workshops, and conferences relevant to poultry science and education.
- Encourage continuous professional development to enhance teaching quality and research output.
- Target Date: Ongoing

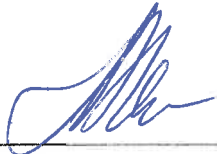
11. Long-Term Strategic Planning:

- Develop a comprehensive long-term strategic plan for the BS Poultry Program, outlining objectives, milestones, resource requirements, and sustainability measures.
- Engage key stakeholders in the planning process to ensure alignment with departmental and institutional goals.
- Target Date: Within 1 year

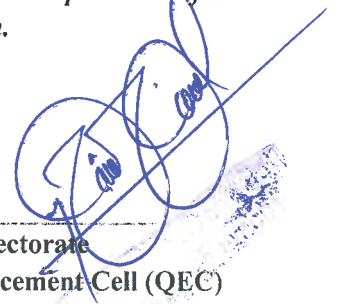
12. Documentation and Reporting:

- Maintain thorough documentation of all action plan activities, including progress reports, meeting minutes, and correspondence.
- Prepare periodic reports for internal and external stakeholders to provide updates on progress and outcomes achieved.
- Target Date: Ongoing

By implementing this action plan, the BS Poultry Program in the Department of Physiology and QEC UOK aims to address identified challenges, enhance program quality, and ensure the provision of a conducive learning environment for students pursuing poultry science education.



Prof. Dr. Taseer Ahmed Khan
Chairperson
Department of Physiology
Chairman
Department of Physiology
University of Karachi



Directorate
of Quality Enhancement Cell (QEC)

Department of Physiology (Poultry Science)
University of Karachi

Assesment Team (AT) Report

Department: **Department of Physiology, UoK**

Criteria: **NAEAC-SAR**

Assessment team: **Dr. Hidayatullah Soomro (Team Leader), Dr. Fazul Nabi (Team Member)**

Summary:

General observations:

Department of Physiology is in compliance as per the requirements of NAEAC-SAR and continual improvement has been witnessed. Few gaps have been identified during visit; however the department is trying hard to managed and maintain all relevant requirements of NAEAC.

There are total 8 major requirements of the standard. Visit has been mainly conducted against these requirements. It was 1-day activity conducted by 2 members.

1. Dr, Hidayatullah Soomro
2. Dr. Fazul Nabi

CVs are attached as Annex

Criterion 1- Programme Mission, Objectives and Outcomes:

Institutional and departmental policy found established which ensures that they are committed towards the implementation, maintenance and improvement of applicable requirements.

Criterion 2- Curriculum Design and Organization

The curriculum adopted by the department has been approved by the statutory bodies of the university –Board of Studies of the Department, Board of Faculty and Academic Council for BS program. The curriculum has been designed in accordance with the guidelines of HEC.

Criterion 3- Laboratories and Computing Facilities

They have sufficient Laboratory Facilities equipped with all essential equipment's and apparatus. However improvements in respect of few labs can be made for better student learning along with the development of Laboratory manuals/ documentation instruction for the courses which are deficient. The department is in need of additional workspace for the growing program.

Criterion 4 Student Support and Advising

Student advisor has been nominated and appointed to guide students. Students can openly discuss their issues with any staff member comfortably. In addition, they have student council office at university level under the guidance of University Student Advisor.

Courses are being offered with sufficient frequency and number for students to complete the program in a timely manner. Currently, there are no course choices in the curriculum. Guidance and academic advising are available to all the student to make course decisions and career choices

Criterion 5- Process Control

Department of Physiology (Poultry Science)

University of Karachi

Documented policy is established to ensure the admission criteria that is based on quantitative and qualitative assessment and it periodically evaluated.

All registrations and progress of the students in the program are properly monitored, analysed and evaluated.

Highly qualified faculty members are recruited and retained as per HEC recommendation. Procedure found in place for the evaluation and promotion of faculty based on performance. Teachers are trained on delivery skills to ensure teaching and delivery of course in an effective manner. Procedure has been established ensuring that graduates have completed the requirements of the program.

Criterion 6- Faculty

Full time faculty is provided to adequately cover the programme areas / courses with continuity and stability. However fresh PhD faculty need to be recruited to further strengthen the program. However existing faculty holds PhD except for a very few.

Criterion 7- Institutional Facilities

The Institution have the infrastructure to support new trends in learning such as E-learning. Library possesses up-to-date technical collection relevant to the program and adequately staffed with professional personnel. More space in terms of classrooms and Labs are needed for the growing program.

Criterion 8- Institutional Support

In order to manage the department, the department currently has limited resources. Moreover, since the last two years, the department has not received adequate amount in term of grant from the university, leading the department to lack of inspiration, passion, devotion and commitment.

Non-conformities:

S.#	Clause	Non-Conformity	Root Cause	Corrective Action Plan	Target Date
1.	1.1	10 objectives found established. However, objectives found not measurable e.g. to establish link between teaching and research institute.	Due to lack of awareness on exact requirement of 'measurable' objectives	Training will be provided to faculty on Quality Management System. Measurable objectives will be established	1 Year
2.	3.2	Though sufficient support staff is available for laboratory work. However, they are not trained.	Due to financial constraints. Competent lab staff is not being hired.	Trainings will be provided to enable the hired staff to work effectively. Institute will be informed to allocate the budget in order to hire a competent lab personals.	1 Year
3.	3.3 (iii)	The university website http://www.uok.edu.pk has a link for department of Physiology as https://uok.edu.pk/faculties/physiology/	It was overlooked.	It will be communicated to the KU IT department to solve the matter.	6 months

Department of Physiology (Poultry Science)
University of Karachi

		index.php . However, some information is still not available e.g. course scheme, degree passing criteria and faculty profiles.		Communication channel will be further improved to ensure changes will be reflected immediately	
4.	3.3 (ii)	The internet facility is available through main communication network of university under the umbrella of PERN, HEC. However due to shifting of computer lab facility is not available at the moment for students.	Due to budget constraints the renovation was not complete.	Aggressive Follow-ups will be made to get work done as soon as possible.	1 Year
5.	7.3	The department has 5 classrooms and 1 auditorium. However two have got multimedia installed in it and other doesn't whereas a mobile multimedia is being facilitated by the offices and when required.	Due to budget constraints the same is limited and delays in approvals is a major factor towards the same.	Aggressive Follow-ups will be made to get the application for computers approved. Issue will be discussed in internal periodic meetings.	1 Year
6.	8.3	Resources (financial) were found not adequately provided by the institute to the department e.g. lack of chemicals, research lab, pilot plant, R&D lab etc.	Due to budget constraints and delays in approvals of computers from the institute.	Aggressive Follow-ups will be made to get the application for lack of chemicals, research lab, pilot plant, R&D lab etc. approved. Issue will be discussed in internal periodic meetings.	1 Year
7		Lack of Feed mill and hatchery is a flaw in the program.	Due to high cost of equipment and lack of funds the same is not being achieved.	Industry will be approached and asked for supporting the program through building of infrastructure facilities.	1 Year

**Department of Physiology (Poultry Science)
University of Karachi**

Assessment Team



Dr. Hidayatullah Soomro
Team Leader



Dr. Fazul Nabi
Team Member

Program Team



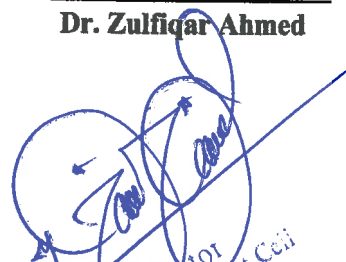
Dr. S. M Ghufraan Saeed



Dr. Zulfiqar Ahmed



Prof. Dr. Taseer Ahmed Khan
Chairperson
Department of Physiology



Mr. Jayed Akram
Quality enhancement Cell (QEC)

Dr. Taseer Ahmed Khan
Chairman
Department of Physiology
University of Karachi

Quality Enhancement Cell
University of Karachi

Table A.2 Assessment Results Implementation Plan Summary

AT Finding	Corrective Action	Implementation Date	Responsible Body	Resources Needed
1. 10 objectives found established. However, objectives found not measurable e.g. to establish link between teaching and research institute.	Training will be provided to faculty on Quality Management System. Measurable objectives will be established	1 Year	BOS	Involment of ORIC and Industry to Support / achive objectives
2. Though sufficient support staff is available for laboratory work. However, they are not trained.	Trainings will be provided to enable the hired staff to work effectively. Institute will be informed to allocate the budget in order to hire a competent lab personals.	1 Year	Dr. Zulfiqar Ahmed	Hiring of trained personal or training program
3. The university website http://www.uok.edu.pk has a link for department of Physiology as https://uok.edu.pk/faculties/physiology/index.php . However, some information is still not available e.g. course scheme, degree passing criteria and faculty profiles.	It will be communicated to the KU IT department to solve the matter. Communication channel will be further improved to ensure changes will be reflected immediately	06 Months	K.U Main Communication (IT) Department	-
4. The internet facility is available through main communication network of university under the umbrella of PERN, HEC. However due to shifting of computer lab facility is not available at the moment for students.	Aggressive Follow-ups will be made to get work done as soon as possible.	1 Year	Dr. Taseer Ahmed Khan	Funds to renovate to new labs

<p>5. The department has 5 classrooms and 1 auditorium. However two have got multimedia installed in it and other doesn't whereas a mobile multimedia is being facilitated by the offices and when required.</p>	<p>Aggressive Follow-ups will be made to get the application for computers approved. Issue will be discussed in internal periodic meetings.</p>	<p>1 Year</p>	<p>Purchase</p>	<p>Funds to manage smart class room facility</p>
<p>6. Resources (financial) were found not adequately provided by the institute to the department e.g. lack of chemicals, research lab, pilot plant, R&D lab etc.</p>	<p>Aggressive Follow-ups will be made to get the application for lack of chemicals, research lab, pilot plant, R&D lab etc. approved. Issue will be discussed in internal periodic meetings.</p>	<p>1 Year</p>	<p>Director Finance</p>	<p>Funds to be provided by the University to manage the lab resources</p>
<p>7. Lack of Feed mill and hatchery is a flaw in the program.</p>	<p>Industry will be approached and asked for supporting the program through building of infrastructure facilities.</p>	<p>1 Year</p>	<p>K.U Administration</p>	
<p>Chairman's Comments</p>				
<p>Name and Signature</p>				
<p>Deans's Comments</p>				
<p>Name and Signature</p>				
<p>QEC Comments</p>				
<p>Name and Signature</p>				



Quality Enhancement Cell University of Karachi



QEC Directorate

Ref. No.: QEC-KU/22/04/1372.5

Dated: 12th April 2022

NOTIFICATION

It is to notify to all concerned that following are the **Program Team (PT)** and **Assessment Team (AT)** dedicated to work on **Self-Assessment Report (SAR)** of Poultry Science Program being taught at the Department of Physiology, University of Karachi.

Program Team (PT)

- *Dr..Zulfiqar Ahmed*
Assistant Professor, Department of Physiology, UoK
zuahmed@uok.edu.pk
- *Dr. Syed Muhammad Ghufuran Saeed*
Assistant Professor, Department of Food Science and Technology, UoK
ghufuran@uok.edu.pk

Assessment Team (AT)

- *Dr. Hidayatullah Soomro*
Associate Professor, In-charge, Department of Veterinary Medicine (Avian Medicine)
Faculty of Veterinary Science Shaheed Benazir Bhutto University of Veterinary and Animal
Sciences (SBBUVAS) Sakrand
hidayat.soomro@faculty.sbbuvas.edu.pk
- *Dr Fazul Nabi*
Associate professor, Department of Poultry Science, LUAWMS Uthal Balochistan
fazulnabi.vas@luawms.edu.pk

Note: The above mentioned Teams are valid till June 2024.

Jawaid Akram
Deputy Director

CC. to:

- *The Chairperson, Department of Physiology, UoK*
- *QEC File*

Quality Enhancement Cell

Check list for Assessment Team of Academic Programs taught at your Department based on last 2.5 years Academic and Administrative data

Department Name: Physiology (Postgraduate) Date of Visit: 4-1-2024
Name of AT Members: (1) Dr. Hidayatullah (2) _____
(3) _____ (4) _____

I. PROGRAM MISSION, OBJECTIVE AND OUTCOMES

1. Has the department documented/ prepared their line of action in-line with the University vision in the SARs?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

2. Has the department documented program's mission in-line with the University Mission for level 6/7/8 as PQF?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

3. Has the department documented program's objective according to the course deliverables?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

4. Has the department documented program's learning outcomes according to OBE or general?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

5. How many steps has the department taken to fulfill program mission?

(1) None (2) Very few (3) Some (4) Many

Statement of Justification: _____

6. How many steps has the department taken to fulfill program objectives?

(1) None (2) Very few (3) Some (4) Many

Statement of Justification: _____

7. How many steps has the department taken to achieve program targeted learning / subjective outcomes?

(1) None (2) Very few (3) Some (4) Many

8. How many significant future plans have been devised for the development of the programs?

(1) None (2) Very few (3) Significant

9. Does the department have its own assessment method prescribed in SAR Manual, Manual of Annual appraisal/ approved for teaching- nonteaching, centralized methodology?

(1) Yes, Well established (2) Yes, but not well established (3) Not at all

10. How many faculty members are aware of program vision and mission?

(1) None (2) Some (3) Mostly (4) All

11. How many faculty members are aware of program objective and outcome?

(1) None (2) Some (3) Mostly (4) All

12. How many students are satisfied with the courses being taught at the institute which is extracted through Course Evaluation as per SAR Manual of HEC?

(1) 75% (2) 50% (3) 75% (4) above 75%

Handwritten signature/initials

Handwritten signature
Quality Enhancement Cell
University of Karachi

II. CURRICULUM DESIGN AND ORGANIZATION

1. When was the curriculum last revised?

- (1) Four years ago (2) Three years ago (3) Two years ago (4) One year ago

Date: _____, At Which Statutory level: _____

2. Is the curriculum approved by Federal Regulatory Body or relevant Accreditation Council?

- (1) No (2) Yes, in some subjects (3) Completely HEC- approved

Justification: _____

3. Is the curriculum designed and organized helpful to achieve the program objectives?

- (1) No (2) To some extent (3) Yes

4. Are the advances in the discipline included in the curriculum in your department?

- (1) No (2) To some extent (3) Yes

5. How many courses meet programs objectives in your department?

- (1) All (2) Many (3) Very few (4) None

6. How much does the curriculum satisfy the core requirements for the programme as specified by the respective regulatory / accreditation body?

- (1) 25% (2) 50% (3) 75% (4) above 75%

7. How much does the curriculum satisfy the general education, arts and professional and other discipline requirements for the programme as specified by the respective regulatory / accreditation body?

- (1) 25% (2) 50% (3) 75% (4) above 75%

8. How many IT courses are included in the program according to your academic/ degree requirement?

- (1) None (2) Only One (3) Two Courses (4) More than Two courses
(5) Fundamental

9. What is the duration of IT courses being taught?

- (1) One semester (2) Two semesters (3) More than Two Semesters
(4) Any other. Please specify _____.

10. What is the level of students' performance in IT skills according to the discipline/ subjective requirement?

- (1) Very good (2) Good (3) Average (4) Poor

11. How many courses are included to develop oral and written communication skills of students?

- (1) None (2) Only One (3) Two Courses (4) More than Two courses/
Foundational courses only

12. What is the duration of communication skills courses being taught?

- (1) One semester (2) Two semesters (3) More than Two Semesters
(4) Any other. Please specify _____.

13. What is the level of students' language proficiency in terms of reading/ writing/ speaking?

- (1) Very good (2) Good (3) Average (4) Poor

Handwritten signature

Handwritten signature
-2-
University of Karachi

III. LABORATORIES OR COMPUTING FACILITIES

1. How many laboratories are there in the department?

- (1) None (2) One (3) Two to three (4) More than three

2. What is the over all condition of labs?

- (1) Well organized & equipped (2) Significantly organized & equipped
(3) Reasonable organized & equipped (4) Poorly organized & equipped

3. How many laboratories are not fully furnished?

- (1) More than three (2) Three to Five (3) One to Three (4) None
Please name them as well. _____

4. How many scientific instruments are not functional?

- (1) Six or more (2) Three to Five (3) One to Three (4) None

Please List them: _____, _____, _____

5. Are the computing facilities available for faculty members?

- (1) No (2) To some extent (3) Yes, Available to all

6. Are the computing facilities adequate and available for students?

- (1) No (2) To some extent (3) Yes, Available to all

7. Is Internet facility available for the students?

- (1) No (2) Available but not for all (3) Yes, Available to all

8. Do the computing facilities support the computing component of the programme?

- (1) 25% (2) 50% (3) 75% (4) above 75%

9. Is there adequate personnel support for instructions and maintenance of the laboratories?

- (1) Yes (2) To some extent (3) Not at all

10. Are laboratory manuals/documentation/instructions for experiments available and readily accessible to faculty and students?

- (1) No (2) Available but only for faculty (3) Yes, Available to all

11. Are the support staff and faculty aware of the safety rules and laboratory ethics?

- (1) Yes, very well (2) To some extent (3) Not at all

12. Do all the laboratories possess fire extinguishers and other safety measures?

- (1) Yes, all (2) Yes, but few (3) Not at all

13. How many computer experts are in the department?

- (1) None (2) One (3) Two (4) Three or more

Richard S. ...

[Handwritten signature]
- 3 -

IV. STUDENT SUPPORT AND ADVISING

1. Are the faculty members available after the lecture time to advise or guide students?

- (1) Yes, Always (2) Some time (3) Never

2. Does the department provide guidance to all the students on how to complete the program, to make course decisions and career choices?

- (1) Yes (2) To some extent (3) No

3. Does the department extend extra-curricular and co-curricular activities to students?

- (1) No (2) To some extent (3) To a great extent

4. How often required courses are offered?

- (1) Once a year (2) Every Semester

5. How often elective courses are offered?

- (1) Once a year (2) Every Semester

6. Do students have access to professional counseling when necessary?

- (1) Yes, All the time (2) Rarely (3) Not at all

V. PROCESS CONTROL

1. When was the last admission criteria revised?

- (1) Last year (2) Two years back (3) More than five years back

VI. FACULTY

1. How many faculty members are Post-doctorate?

- (1) None (2) One (3) Two (4) Three or more

2. How many faculty members are PhD?

- (1) None (2) One (3) Two (4) Three or more

3. How many faculty members are MS/M. Phil?

- (1) None (2) One (3) Two (4) Three or more

4. How many faculty members are FCPS or Equivalent?

- (1) None (2) One (3) Two (4) Three or more

5. How many faculty members have earned international / national / institutional awards?

- (1) None (2) One (3) Two (4) Three or more

6. How many faculty members have earned international / national / institutional fellowship?

- (1) None (2) One (3) Two (4) Three or more

7. Is the teaching load adequate on faculty?

- (1) Yes (2) Some what (3) Not at all.

Richard S. ...

8. How many research papers have been published by the faculty in recognized journals?

- (1) None (2) Up to 5 (3) Up to 10 (4) More than 10

9. How many books chapters have been written by the faculty?

- (1) None (2) Up to 3 (3) Up to 6 (4) More than 6

10. How many conferences, workshop or symposia have been conducted by the department?

- (1) None (2) Up to 2 (3) Up to 4 (4) More than 4

11. How many teachers have participated in conferences / symposia / workshops?

- (1) None (2) Up to 3 (3) Up to 6 (4) More than 6

12. Have all faculty members prepared their resume in line with HEC guidelines?

- (1) None (2) Some (3) More than half (4) All

13. Are the faculty members current and active in their discipline and have they necessary technical depth and breadth to support the program?

- (1) None (2) Some Members (3) More than half (4) All

14. Are there enough faculty members to provide continuity and stability to cover the curriculum adequately and effectively?

- (1) Yes (2) To some extent (3) No

15. Are there any existing faculty development Programmes at the departmental/ university level?

- (1) Yes (2) No

Sym (PDC)

16. How often faculty Programmes are evaluated?

- (1) On yearly Basis (2) After the completion of each program
(3) After 2-3 years

17. How many faculty members are satisfied with their jobs?

- 1) 25% (2) 50% (3) 75% (4) above 75%

VII. INSTITUTIONAL FACILITIES

1. Are there enough number of classrooms in the department?

- (1) No (2) To some extent (3) Yes

2. Are classrooms well furnished?

- (1) No (2) To some extent (3) Well furnished

3. Is there audio-visual facility available in each classroom?

- (1) No (2) Yes (3) To some extent.

4. Are there enough numbers of offices in the department for teachers and office work?

- (1) No (2) Yes (3) To some extent

Michal Sultan
20/20/2018

5. Is there any seminar / conference room in the department?

(1) No (2) Yes

6. Is there enough number of books in the relevant subjects in the library?

(1) No (2) Yes

7. Are books easily available for all students and faculty?

(1) Yes, Always (2) Some time (3) Never

8. Is the library staff professional and supportive?

(1) Yes, Always (2) Yes but Occasionally (3) Not at all

VIII. INSTITUTIONAL SUPPORT

1. Is the department satisfied with the grant it receives from the university?

1) Yes, (2) To some extent (3) Not at all

2. Does the department receive grant from other organizations?

(1) No (2) Yes

3. Is there any incentive / package for retaining high caliber faculty?

(1) No (2) Yes (3) To some extent

IX. Your over all comments about the performance of the department / college
(Please use separate sheet / back of the sheet if required)

X. Areas for improvements identified by you:
(Please use separate sheet / back of the sheet if required)

Arifullah
2020

[Handwritten signature]

Quality Enhancement Cell

Check list for Assessment Team of Academic Programs taught at your Department based on last 2.5 years Academic and Administrative data

Department Name: Physiology/Poultry Science Date of Visit: 4-1-2024

Name of AT Members: (1) Dr. Fazal Nabi (2) _____
(3) _____ (4) _____

I. PROGRAM MISSION, OBJECTIVE AND OUTCOMES

1. Has the department documented/ prepared their line of action in-line with the University vision in the SARs?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

2. Has the department documented program's mission in-line with the University Mission for level 6/7/8 as PQF?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

3. Has the department documented program's objective according to the course deliverables?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

4. Has the department documented program's learning outcomes according to OBE or general?

(1) Yes/clearly (2) Incompletely/vaguely (3) No

5. How many steps has the department taken to fulfill program mission?

(1) None (2) Very few (3) Some (4) Many

Statement of Justification: _____

6. How many steps has the department taken to fulfill program objectives?

(1) None (2) Very few (3) Some (4) Many

Statement of Justification: _____

7. How many steps has the department taken to achieve program targeted learning / subjective outcomes?

(1) None (2) Very few (3) Some (4) Many

8. How many significant future plans have been devised for the development of the programs?

(1) None (2) Very few (3) Significant

9. Does the department have its own assessment method prescribed in SAR Manual, Manual of Annual appraisal/ approved for teaching- nonteaching, centralized methodology?

(1) Yes, Well established (2) Yes, but not well established (3) Not at all

10. How many faculty members are aware of program vision and mission?

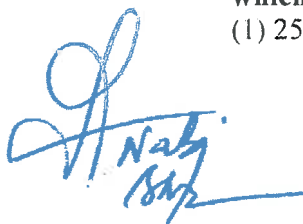
(1) None (2) Some (3) Mostly (4) All

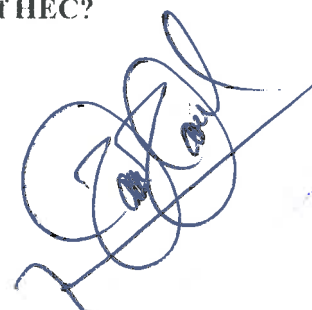
11. How many faculty members are aware of program objective and outcome?

(1) None (2) Some (3) Mostly (4) All

12. How many students are satisfied with the courses being taught at the institute which is extracted through Course Evaluation as per SAR Manual of HEC?

(1) 25% (2) 50% (3) 75% (4) above 75%


Fazal Nabi



II. CURRICULUM DESIGN AND ORGANIZATION

1. When was the curriculum last revised?

- (1) Four years ago (2) Three years ago (3) Two years ago (4) One year ago
Date: _____, At Which Statutory level: _____

2. Is the curriculum approved by Federal Regulatory Body or relevant Accreditation Council?

- (1) No (2) Yes, in some subjects (3) Completely HEC- approved

Justification: _____

3. Is the curriculum designed and organized helpful to achieve the program objectives?

- (1) No (2) To some extent (3) Yes

4. Are the advances in the discipline included in the curriculum in your department?

- (1) No (2) To some extent (3) Yes

5. How many courses meet programs objectives in your department?

- (1) All (2) Many (3) Very few (4) None

6. How much does the curriculum satisfy the core requirements for the programme as specified by the respective regulatory /accreditation body?

- (1) 25% (2) 50% (3) 75% (4) above 75%

7. How much does the curriculum satisfy the general education, arts and professional and other discipline requirements for the programme as specified by the respective regulatory /accreditation body?

- (1) 25% (2) 50% (3) 75% (4) above 75%

8. How many IT courses are included in the program according to your academic/ degree requirement?

- (1) None (2) Only One (3) Two Courses (4) More than Two courses
(5) Fundamental

9. What is the duration of IT courses being taught?

- (1) One semester (2) Two semesters (3) More than Two Semesters
(4) Any other. Please specify _____

10. What is the level of students' performance in IT skills according to the discipline/ subjective requirement?

- (1) Very good (2) Good (3) Average (4) Poor

11. How many courses are included to develop oral and written communication skills of students?

- (1) None (2) Only One (3) Two Courses (4) More than Two courses/
Foundational courses only

12. What is the duration of communication skills courses being taught?

- (1) One semester (2) Two semesters (3) More than Two Semesters
(4) Any other. Please specify _____

13. What is the level of students' language proficiency in terms of reading/ writing/ speaking?

- (1) Very good (2) Good (3) Average (4) Poor


Handwritten signature in blue ink.


Handwritten signature in blue ink.

IV. STUDENT SUPPORT AND ADVISING

1. Are the faculty members available after the lecture time to advise or guide students?

- (1) Yes, Always (2) Some time (3) Never

2. Does the department provide guidance to all the students on how to complete the program, to make course decisions and career choices?

- (1) Yes (2) To some extent (3) No

3. Does the department extend extra-curricular and co-curricular activities to students?

- (1) No (2) To some extent (3) To a great extent

4. How often required courses are offered?

- (1) Once a year (2) Every Semester

5. How often elective courses are offered?

- (1) Once a year (2) Every Semester

6. Do students have access to professional counseling when necessary?

- (1) Yes, All the time (2) Rarely (3) Not at all

V. PROCESS CONTROL

1. When was the last admission criteria revised?

- (1) Last year (2) Two years back (3) More than five years back

VI. FACULTY

1. How many faculty members are Post-doctorate?

- (1) None (2) One (3) Two (4) Three or more

2. How many faculty members are PhD?

- (1) None (2) One (3) Two (4) Three or more

3. How many faculty members are MS/M. Phil?

- (1) None (2) One (3) Two (4) Three or more

4. How many faculty members are FCPS or Equivalent?

- (1) None (2) One (3) Two (4) Three or more

5. How many faculty members have earned international / national / institutional awards?

- (1) None (2) One (3) Two (4) Three or more

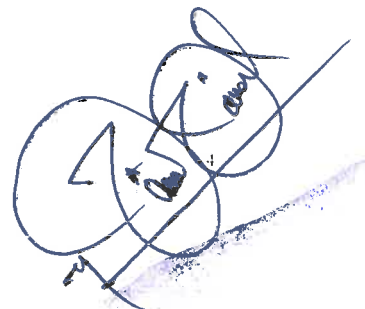
6. How many faculty members have earned international / national / institutional fellowship?

- (1) None (2) One (3) Two (4) Three or more

7. Is the teaching load adequate on faculty?

- (1) Yes (2) Some what (3) Not at all.


J. N. Singh



8. How many research papers have been published by the faculty in recognized journals?

- (1) None (2) Up to 5 (3) Up to 10 (4) More than 10

9. How many books chapters have been written by the faculty?

- (1) None (2) Up to 3 (3) Up to 6 (4) More than 6

10. How many conferences, workshop or symposia have been conducted by the department?

- (1) None (2) Up to 2 (3) Up to 4 (4) More than 4

11. How many teachers have participated in conferences / symposia / workshops?

- (1) None (2) Up to 3 (3) Up to 6 (4) More than 6

12. Have all faculty members prepared their resume in line with HEC guidelines?

- (1) None (2) Some (3) More than half (4) All

13. Are the faculty members current and active in their discipline and have they necessary technical depth and breadth to support the program?

- (1) None (2) Some Members (3) More than half (4) All

14. Are there enough faculty members to provide continuity and stability to cover the curriculum adequately and effectively?

- (1) Yes (2) To some extent (3) No

15. Are. There any existing faculty development Programmes at the departmental/ university level?

- (1) Yes (2) No

Sym (PDC)

16. How often faculty Programmes are evaluated?

- (1) On yearly Basis (2) After the completion of each program
(3) After 2-3 years

17. How many faculty members are satisfied with their jobs?

- 1) 25% (2) 50% (3) 75% (4) above 75%

VII. INSTITUTIONAL FACILITIES

1. Are there enough number of classrooms in the department?

- (1) No (2) To some extent (3) Yes

2. Are classrooms well furnished?

- (1) No (2) To some extent (3) Well furnished

3. Is there audio-visual facility available in each classroom?

- (1) No (2) Yes (3) To some extent.

4. Are there enough numbers of offices in the department for teachers and office work?

- (1) No (2) Yes (3) To some extent

J. Nahi
8/2/20

(Signature)

5. Is there any seminar / conference room in the department?

(1) No (2) Yes

6. Is there enough number of books in the relevant subjects in the library?

(1) No (2) Yes

7. Are books easily available for all students and faculty?

(1) Yes, Always (2) Some time (3) Never

8. Is the library staff professional and supportive?

(1) Yes, Always (2) Yes but Occasionally (3) Not at all

VIII. INSTITUTIONAL SUPPORT

1. Is the department satisfied with the grant it receives from the university?

1) Yes, (2) To some extent (3) Not at all

2. Does the department receive grant from other organizations?

(1) No (2) Yes

3. Is there any incentive / package for retaining high caliber faculty?

(1) No (2) Yes (3) To some extent

IX. Your over all comments about the performance of the department / college
(Please use separate sheet / back of the sheet if required)

Report attached

X. Areas for improvements identified by you:
(Please use separate sheet / back of the sheet if required)

Report attached


J. N. Singh





Self-Assessment Report

Department of Physiology (Poultry Science)
University of Karachi

Submitted to

**Quality Enhancement Cell
University of Karachi**

ASSESSMENT TEAM:



Dr. Hidayatullah Soomro
Team Leader



Dr. Fazul Nabi
Team Member
Dr. Fazul Nabi
Associate Professor
Faculty Of Veterinary & Animal Sciences
LUAWMS, Uthal Balochistan


PROGRAMME TEAM



Dr. S.M. Ghufan Saeed



Dr. Zulfiqar Ahmed

1. 

Director
Quality Enhancement Cell
University of Karachi.



Self-Assessment Report

Department of Physiology (Poultry Science)
University of Karachi

Submitted to

Quality Enhancement Cell
University of Karachi

ASSESSMENT TEAM:

Dr. Hidayatullah Soomro
Team Leader

Dr. Fazul Nabi
Team Member

PROGRAMME TEAM

Dr. S.M.Ghufran Saeed

Dr. Zulfiqar Ahmed

CONTENTS

Criterion 1- Programme Mission, Objectives and Outcomes		Page #
	Introduction	5
Standard 1-1	Programme Mission and Objectives	6
Standard 1-2	Programme Outcomes	9

Criterion 2- Curriculum Design and Organization		Page #
	Programme of studies offered	11
Standard 2-1	Correlation of Courses with Objectives	13
Standard 2-2	Theoretical background of program	14
Standard 2-3	Core Requirements of the program	14
Standard 2-4	Major requirements as specified by Acceleration Body	14
Standard 2-5	Maths and Basic Sciences, Engineering Topics, General Education.	14
Standard 2-6	Information Technology Content Integration Throughout the Programme	15
Standard 2-7	Communication Skills (Oral & Written)	15

Criterion 3- Laboratories and Computing Facilities		Page #
	Laboratory and Computing Facilities	17
Standard 3-1	Lab Manuals/ Documentation / Instructions	17
Standard 3-2	Adequate Support Personnel for labs	17
Standard 3-3	Adequate computing infrastructure and facilities	17

Criterion 4 Student Support and Advising		Page #
Standard 4-1	Effective Faculty / Student Interaction	20
Standard 4-2	Professional Advising and Counseling	20
Standard 4-3	Professional Advising and Counseling	20

Criterion 5- Process Control		Page #
Standard 5-1	Admission Process	22
Standard 5-2	Registration and Student	22
Standard 5-3	Faculty Recruitment and Retention Process	22
Standard 5-4	Effective Teaching and Learning Process	24
Standard 5-5	Programme requirements completion process	24

Criterion 6- Faculty		Page #
Standard 6-1	Programme Faculty Qualifications and Number	26
Standard 6-2	Current Faculty, Scholarly activities and development	26
Standard 6-3	Faculty motivation and Job satisfaction	26

Criterion 7- Institutional Facilities		Page #
Standard 7-1	New Trends in Learning	28
Standard 7-2	Library Collections & Staff	28
Standard 7-3	Class rooms & Offices Adequacy	28

Criterion 8- Institutional Support		Page #
Standard 8-1	Support & Financial Resources	30
Standard 8-2	Number & Quality of GSs, RAs, & Ph.D. Students	30
Standard 8-3	Financial Support for Library, Labs & Computing Facilities	30

Faculty CVs & SURVEY'S RESULTS		Page #
	Faculty CVs	
	Teacher's & Course Evaluation Survey	

INTRODUCTION

The department of Physiology enjoys a very prominent position in the Faculty of Science at University of Karachi running one year Master's program in Poultry Physiology for the last 30 years. The said program has produced many graduates who are presently serving in the field at various positions not only locally but also internationally. The program was initiated in collaboration with the Poultry Research Institute, Animal Science Complex Korangi under the UNDP FAO project post completion of the PL480 project on Newcastle disease virus won by a faculty at Physiology University of Karachi. With the passage of time and advancement in the field the industrial demands was to start a 4 year BS program and the same was being designed and launched in 2022.

The BS in Poultry Science program at University of Karachi is designed to provide students with a comprehensive understanding of the principles and practices essential for successful poultry production and management. Through a combination of theoretical coursework, hands-on laboratory experiences, and practical training, students gain the knowledge and skills necessary to excel in various roles within the poultry industry.

The curriculum covers a wide range of topics, including poultry nutrition, genetics and breeding, health and disease management, reproduction, hatchery operations, environmental stewardship, and business management. Students learn about the biology and behavior of poultry species, the latest advancements in poultry genetics and biotechnology, and best practices for optimizing flock health, productivity, and welfare.

Hands-on learning opportunities are integrated throughout the program, allowing students to gain practical experience in poultry housing and equipment, feed formulation and analysis, disease diagnosis and treatment, egg grading and incubation, and other essential aspects of poultry production. Field trips to commercial poultry farms, hatcheries, processing plants, and research facilities provide valuable real-world exposure and networking opportunities.

Graduates of the BS Poultry Science program are prepared for a wide range of career opportunities in various sectors of the poultry industry, including production management, flock supervision, quality control, research and development, sales and marketing, consulting, and entrepreneurship. Whether pursuing careers in commercial poultry production, allied industries, government agencies, or academia, graduates are equipped with the knowledge, skills, and practical experience to make meaningful contributions to the sustainable and ethical production of poultry products worldwide.

Chairperson

Department of Physiology (Poultry Science)
University of Karachi

CRITERION-1

PROGRAMME MISSION, OBJECTIVES AND OUTCOMES

Criterion-1: Program Mission, Objectives and Outcomes

Institutional Mission

To educate and train students, especially from Pakistan in Physiology with previous understanding, current theories and future perspectives in the field.

Program Mission Statement

“To provide students with a comprehensive understanding of poultry science through rigorous academic coursework, hands-on experiential learning, and research opportunities, empowering them to become industry leaders, innovators, and advocates for sustainable poultry production and animal welfare.”

Documented measurable objectives to support mission statement

1. To produce qualified Poultry Science graduates for Poultry industries, teaching and research organization.
2. To establish links between Teaching/ research institutions, government, commercial organizations and consumers.
3. Conduct outreach events aimed at promoting awareness of poultry science and its importance in food production, animal welfare, and sustainability.
4. To introduce new feed compositions based on plant protein sources for better environmental condition.
5. To incorporate the poultry industry waste for integrated farming approach.
6. To provide consultancy and advisory services to Poultry industry.
7. To provide diagnostic service to the poultry industry.
8. To establish international collaboration with Poultry Science departments and industries by exchanging of students & staff.
9. To introduce novel approaches for value added poultry product development.
10. To organize programs for creating awareness about the importance of safe processed nutritious food.

Table: Program Objectives Assessment

S. No.	Objectives	How Measured	When Measured	Improvement Identified	Improvement Made
1.	To produce qualified Poultry Science graduates for Poultry industries, teaching and research organization.	Industry and other employers' feedback	N/A		
2.	To establish links between Teaching/ research institutions, government, commercial organizations and consumers.	Collaborative projects and research, advisory services	20-1-2022	Library improved	Books donated and kept in library.
3.	Conduct outreach events aimed at promoting awareness of poultry science and its importance in food production, animal welfare, and sustainability.	Seminars, workshop, conferences	2022, 2023	Public understanding towards subject was observed.	More species were added in coming events for diversity.
4	To introduce new feed compositions based on plant protein sources for better environmental condition.	Running field trials and experiments	N/A		
5	To incorporate the poultry industry waste for integrated farming approach.	Integration farming with fish industry	N/A		
6	To provide consultancy and advisory services to Poultry industry.	Industrial sample testing and consultancy	N/A		
7	To provide diagnostic service to the poultry industry.	Develop different diagnostic tests	N/A		
8	To establish international collaboration with Poultry Science departments and industries by exchanging of students & staff.	Exchange programs with universities	N/A		
9	To introduce novel approaches for value added poultry product development.	Developing various food items in collaboration with allied department	N/A		
10	To organize programs for creating awareness about the importance of safe processed nutritious food.	No. of Programs were arranged to achieve the purpose	N/A		

Program Outcomes

After completion of the BS in Poultry Science, the graduate:

1. **Knowledge of Poultry Biology and Physiology:** Graduates will demonstrate a deep understanding of the biological and physiological principles specific to poultry species, including anatomy, reproduction, nutrition and genetics.
2. **Understanding of Poultry Production Systems:** Graduates will comprehend the various production systems used in the poultry industry, including broiler, layer, turkey, and specialty poultry production, and understand the factors influencing production efficiency, sustainability, and animal welfare.
3. **Proficiency in Poultry Management Practices:** Graduates will be proficient in applying best management practices for poultry production, including housing and environmental management, disease prevention and control, feed formulation, and biosecurity measures.
4. **Skills in Poultry Health and Disease Management:** Graduates will possess the skills necessary to identify common poultry diseases, understand principles of disease prevention and control, and implement appropriate management strategies to maintain flock health and welfare.
5. **Knowledge of Poultry Nutrition:** Graduates will understand the principles of poultry nutrition, including nutrient requirements, feed formulation, and feeding strategies for different stages of poultry production, and be able to optimize feed efficiency and production performance.
6. **Ability to Conduct Poultry Research:** Graduates will have the ability to design, conduct, and analyze poultry-related research studies, including experimental design, data collection and analysis, and interpretation of research findings, contributing to the advancement of poultry science.
7. **Communication and Problem-Solving Skills:** Graduates will demonstrate effective communication skills, both written and oral, and the ability to collaborate with others in multidisciplinary teams to solve complex problems related to poultry production, sustainability, and food safety.
8. **Ethical and Professional Behavior:** Graduates will exhibit ethical behavior and professional conduct in all aspects of their work, including animal care and welfare, research integrity, and interactions with industry stakeholders and the public.
9. **Adaptability and Lifelong Learning:** Graduates will recognize the importance of staying current with advancements in poultry science and related fields and demonstrate the ability to adapt to changes in technology, industry practices, and societal expectations throughout their careers.
10. **Preparation for Careers in Poultry Industry and Related Fields:** Graduates will be prepared for careers in various sectors of the poultry industry, including production management, research and development, quality assurance, sales and marketing, and regulatory agencies, as well as further education in graduate or professional programs.

a) Strengths and Weaknesses of the Program

i) Strengths:

1. PhD faculty having experience of research and/ or training in reputed universities or institutes
2. Dedicated classrooms with multimedia.
3. Well established and functional labs.
4. Compulsory internship.
5. Compulsory research project in final year based on industrial problem.
6. Industrial visits related to the courses taught in 3rd and 4th year

ii) Weaknesses

- 1- More faculty with specialized degree in the said area.
- 2- Unavailability of hatchery facility on university campus.
- 3- Unavailability of computers in the seminar library.
- 4- Unavailability of feed mixing facility on university campus.
- 5- Lack of separate building for the program.

b) Future Development Plans

- 1- Setting up broiler and layer sheds with partition on University campus.
- 2- Setting up feed mixing facility on University campus.
- 3- Setting up a separate department of Poultry Science and Technology.
- 4- Promote community services to minimize protein deficiency in school children.
- 5- Launching a post graduate program in Poultry Science.

Standard 1-4: The department must assess its overall performance periodically.

a) Student Enrolment

S. No	Year	Degree		
		BS	M.Phil	Ph.D.
1	2022	45	-	-
2	2023	7	-	-
3	2024	7	-	-

- b) Student/Faculty Ratio (15:1)
- c) i) Time for Bachelors (4 years)
- d) The average student grade point (CGPA) Not Applicable

e Student/Faculty Satisfaction

Faculty:

Faculty is satisfied with

- 1- Job facilities and environment
- 2- Progress opportunities
- 3- Curriculum design, admission and examination policies

Faculty is unsatisfied with

- 1- Computer and internet facilities
- 2- Lab running grants and facility
- 3- Unavailability of experimental sheds and feed mixing facility.

CRITERION-2
CURRICULUM DESIGN AND ORGANIZATION

Criterion-2: Curriculum Design and Organization**Program of Studies offered****Year / Semester wise Scheme of Studies of BS-Poultry Science**

S. No.	Course Code	Course Title	Credit Hours	
SEMESTER I				
1	300.1	English Compulsory	3+0	3
2	300.3	Basic Mathematics / Biology Compulsory	3+0	3
3	300.5	Islamic Studies Compulsory	2+0	2
4	PSC-301	Introduction to Poultry Science	2+1	3
5	PSC-303	Rural Poultry Production	1+1	2
6	PSC-305	Fundamentals of Animal Nutrition	2+1	3
7	PSC-307	Principles of Heredity	2+1	3
		Total		19
SEMESTER II				
1	300.2	Pakistan Studies Compulsory	2+0	2
2	300.4	Urdu Compulsory	2+0	2
3	300.6	Introduction to Information and Communication Technologies	2+1	3
4	PSC-302	Poultry Physiology	2+1	3
5	PSC-304	Metabolism of Primary Nutrients	2+1	3
6	PSC-306	Avian Anatomy and Histology	2+1	3
7	PSC-308	Introduction to Biochemistry	2+1	3
		Total		19
SEMESTER III				
1	PSC-401	Incubation Principles and modern Hatchery Management	2+1	3
2	PSC-403	Fancy Bird Production	1+1	2
3	PSC-405	Poultry House Structure and Equipment	2+1	3
4	PSC-407	Mineral and Vitamin Metabolism	2+1	3
5	PSC-409	Introductory Molecular Genetics and Genomics	2+1	3
6	PSC-411	General Microbiology and Immunology	3+1	4
		Total		18
SEMESTER IV				
2	PSC-402	Broiler Production	2+1	3
3	PSC-404	Poultry Reproduction	2+1	3
4	PSC-406	Principles of Poultry Nutrition	2+1	3
5	PSC-408	General Pathology	2+1	3
6	PSC-410	Introductory Population Genetics	2+1	3
7	PSC-412	Biostatistics and Computer Application	2+1	3
		Total		18
SEMESTER V				
1	PSC-501	Layer Production and Management	2+1	3
2	PSC-503	Poultry Health Management	2+1	3

3	PSC-505	Poultry Feeding Practices	1+1	2
4	PSC-507	Applied Poultry Breeding	2+1	3
5	PSC-509	Animal Pharmacology and Medicine	2+1	3
6	PSC-511	Animal Epidemiology and Public Health	2+1	3
		Total		17
SEMESTER VI				
1	PSC-502	Poultry Products Technology	2+1	3
2	PSC-504	Poultry Business Management	2+0	2
3	PSC-506	Poultry Meat Science	1+1	2
4	PSC-508	Breeder Production and Management	2+1	3
5	PSC-510	Poultry Pathology	2+1	3
6	PSC-512	Feed Evaluation, Formulation and Processing	1+1	2
7	PSC-514	Poultry Extension Education	1+1	2
		Total		17
SEMESTER VII				
1	PSC-601	Farm Records and Data Analysis	1+1	2
2	PSC-603	Conservation and Development of Indigenous Poultry Resources	1+1	2
3	PSC-605	Advanced Feed Manufacturing Technology	2+1	3
4	PSC-607	Poultry Medicine	2+1	3
5	PSC-609	World Poultry Market and Trade	3+0	3
6	PSC-611	Research Methodology and Scientific Writing	0+4	4
		Total		17
SEMESTER VIII				
1	PSC-602	Internship and Report Writing	0+12	12
		Total Credit Hours	137	

Standard 2-1: The Curriculum must be consistent and support the program's documented objectives

The following table manifests how the program content (Courses) meets the Program Objectives.

Courses	Program's Objectives										
	1	2	3	4	5	6	7	8	9	10	
Major Courses	301,30 2,303, 304,30 5,306, 307,30 8 and All 2 nd , 3 rd and 4 th year course s	301, 303, 504, 511, 611	514, 609	304, 305, 406, 407, 412, 505, 512	603, 605	601, 607	408, 503, 509, 510	609, 611	501, 506, 603	514	

Elective Courses	None									
Practical (Field and Lab)	301,302,303,304,305,306,307,308 and All 2 nd , 3 rd and 4 th year courses	301,303,504,511,611	514,609	304,305,406,407,412,505,512	603,605	601,607	408,503,509,510	609,611	501,506,603	514
Internship and Report Writing (602)										

Standard 2-2: Theoretical background, problem analysis and solution design must be stressed within the program's core material.

The following table indicates the elements covered in core courses:

Elements	Courses
i) Theoretical Background	All courses offered by the Department
ii) Problem Analysis	503, 505, 507, 509, 511, 502, 504, 510, 512, 514, 605, 609, 611
iii) Solution Design	All courses of 3 rd and 4 th year Internships

Standard 2-3: The curriculum must satisfy the core requirements for the program, as specified by the respective accreditation body.

&

Standard 2-4: The curriculum must satisfy the major requirements for the program, as specified by the respective accreditation body/council.

The curriculum adopted by the department of Physiology for BS Poultry Science has been approved by the statutory bodies of the university –Board of Studies of the Department, Board of Faculty of the Department and Academic Council

The curriculum has been designed in accordance with the guidelines of NAEAC.

2-5: The curriculum must satisfy the general education, arts and other discipline requirements for the Program as specified by the accreditation body.

Program	General Education	Basic Sciences Discipline requirements
BS	Islamic studies Pakistan studies Urdu English	Bio-Statistics Computer applications Functional Math Functional Biology Introduction to Information and Communication Technologies

Standard 2-6: Information technology component of the curriculum must be integrated throughout the program.

Information technology component of the curriculum is covered by the course entitled “Computer Applications taught in second semester of the program. Besides this, information technology is used in most of the courses for surveys, presentations, data managements and statistical analyses.

Standard 2-7: Oral and written communication skills of the student must be developed and applied in the program.

In addition to the course of communication technologies second semester, assigned presentations, internship reports, project reports and viva in practical exams help developing communication skills.

CRITERION-3
LABORATORY AND COMPUTING FACILITIES

CITERION-3: Laboratory and Computing Facilities

Laboratory Facilities

1. Nutrition Lab (Department of Food Science and Technology)

Flame Photometer, Water Distillery, Refrigerator, pH Meter, Kjeldahl Distillation Apparatus, Micropipettes, Stereoscopic Microscopes, Refractometer, Wiley Mini-Mill/grinder, Hot air Oven, UV-Vis spectrophotometer, Water Deionizer, Hot Plate, Digital Analytical balance, Mechanical Shaker, Water bath, Heating block/ Digestion block, Fume Hood, Soxhlet Apparatus, Muffle Furnace

2. Poultry Pathology Lab

Spectrophotometer, Ultra Low freezer -80C, Refrigerator, Biosafety Cabinet, Refrigerated centrifuge, Gel Documentation system, Bacterial Incubator, water bath, Digital balance, Thermal cycler, UV-Vis spectrophotometer, Gel electrophoresis, pH Meter, egg incubator, Egg candler, Automatic filling syringe,

3. Poultry Science Lab

Computer Facilities

The department lack computer lab and adequate internet facilities for students

Internet Facility

The internet facility is available through main communication network of university under the umbrella of PERN, HEC

However due to unavailability of computers internet facility is not available for students

Standard 3-1: Laboratory manuals/ documentation instruction for experiments must be available and readily accessible to faculty and students

Laboratory manuals/ documentation instruction for experiments are readily available and accessible to faculty and students

Standard 3-2: There must be adequate support personnel for instruction and maintaining the laboratories.

Though support staff is available but they are not trained. A request will be made to university administration for the qualified and trained staff for the proper maintenance of the laboratories

Standard 3-3: The University computing infrastructure and facilities must be adequate to support program's objectives

i) Computing Facilities

The department lack in computing facilities

ii) Multimedia

2 lecture halls and 1 lab has multimedia installed however mobile units are also available.

iii) Website

The university website [http: // www.uok.edu.pk](http://www.uok.edu.pk) has a link for department of Physiology, <https://uok.edu.pk/faculties/physiology/index.php>

iv) Internet

The internet facility is available through main communication network of university under the umbrella of PERN, HEC

However due to unavailability of computers internet facility is not available for students

CRITERION-4
STUDENT SUPPORT AND ADVISING

Criterion-4: Student Support and Advising

A departmental student advisor (nominated by the chairperson of the Department) is appointed by the Vice Chancellor to assist and guide students. Furthermore, support, guidance, and mentoring are given by all faculty members informally. Students can openly discuss their issues with any staff member comfortably. In addition, we have student council office at university level under the guidance of University Student Advisor.

Standard 4-1: Courses must have been offered with sufficient frequency and number for students to complete the program in a timely manner.

Program	Classes per Week	Practical Classes per Week	Research Guidance
BS	As per the course credit hour distribution	As per the course credit hour distribution	Not Applicable

Standard 4-2: Course in the major must be structured to ensure effective interaction between students, faculty and teaching assistants.

Currently, there are no course choices in the curriculum.

Standard 4-3: Guidance on how to complete the program must be available to all students and access to academic advising must be available to make course decisions and career choices

The Departmental Student Advisor is available to guide all students in their career choices and help the students by providing information regarding career opportunities available for them. The opportunities of job, membership in technical and professional societies are notified on the departmental Notice Board by the Chairperson of the Department. In addition, we have student council office at university level under the guidance of University Student Advisor.

CRITERION-5
PROCESS CONTROL

Criterion-5: Process Control

Standard 5-1: The process by which students are admitted to the program must be based on quantitative and qualitative criteria and clearly documented. This process must be periodically evaluated to ensure that it is meeting its objectives.

The admission policy is well documented, centralized and is according to the rules and criteria set by HEC. For this purpose, an advertisement is published in the National News Papers by the Registrar Office. Admission criteria for BS – Poultry Science is H.S.C. pre medical or pre engineering with minimum 50% marks. Admission is granted on merit basis, a merit list of student fulfilling the admission criteria is prepared and admission is granted on the basis of available seats. Admission criteria are reviewed every year and revised (if necessary).

Standard 5-2: The process by which students are registered in the program and monitoring of students progress to ensure timely completion of the program must be documented. This process must be periodically evaluated to ensure that it is meeting its objectives.

The name of the student, after completion of the admission process, is forwarded to the department. A seat number is allotted to every student by the Semester Examinations Section and Enrolment number issued by the enrolment section. Students are evaluated through theory and practical exams and assignments or presentations as well. As, internship and research projects are compulsory in the final year, final year students evaluation is also based on internship and project reports. Marking and grading rules are being followed as per guidance of the semester examination section, University of Karachi.

Standard 5-3: The process of recruiting and retaining highly qualified faculty members must be in place and clearly documented. Also processes and procedures for faculty evaluation, promotion must be consistent with institutional mission statement. These processes must be periodically evaluated to ensure that it is meeting with its objectives.

The university's recruiting strategy is the same as that recommended by the HEC. In national newspapers, vacant and newly created vacancies are advertised, applications are received by the Registrar's Office, scrutinized by the Scrutiny Committee, and call letters are given to short-listed applicants on the basis of the University Authority's expertise, credentials, publications and other qualifications/activities. Applicants are interviewed by the University Selection Board and applicants are selected on merit basis.

The Syndicate approves the selection of candidates for the issuance of orders for joining within a specified period. The recruitment of new candidates depends on the number of vacancies accepted. The HEC-set criteria are met. There is no process at present for retaining highly skilled members of the faculty. The revised pay scale framework, however, is quite appealing. HEC also supports the appointment of highly qualified members as professors from abroad, national professors and deputy professors in the university departments concerned.

Faculty Recruitment / Retaining Policy

As per Karachi University Rules/HEC Criteria

Appointments / Promotions Procedure:

Faculty is appointed and promoted as per Karachi University rules/ HEC Criteria

Basic Pay Scale (BPS)

BPS	18
BPS	19
BPS	20
BPS	21

a. Lecturer (BPS- 18):

Minimum Qualification

As per Karachi University Rules/HEC Criteria

b. Assistant Professor (BPS- 19):

Minimum Qualification

As per Karachi University Rules/HEC Criteria

c. Associate Professor (BPS- 20)

Minimum Qualification

Experience

Minimum Number of Publications

As per Karachi University Rules/HEC Criteria

d. Professor (BPS-21)

Minimum Qualification

Experience

Minimum Number of Publications

Bases for Appointments / Promotions

As per Karachi University Rules/HEC Criteria

Standard 5-4: The process and procedure used to ensure that teaching and delivery of course material to the students emphasizes active learning and that course learning outcomes are met. The process must be periodically evaluated to ensure that it is meeting its objectives.

We pursue a semester scheme. Student success and comprehension are tested at the end of each semester exam by reviewing exam copies. In order to provide high quality instruction, the department frequently reviews the curriculum with respect to advancement in the field. New courses are added with the advent of new sectors and included in the curriculum. In order to ensure active learning and compatibility of the course with its objectives, students are provided with course outlines, course materials, and list of references at the beginning of the semester. Further, different teaching aids like overhead projectors, slides, and multimedia are used to deliver the conceptual contents. Fixed Schedule/ time table is followed by all faculty members, Chairperson of the department regularly gets feedback about the regularity of classes and labs from the students during the semester, progress is also checked periodically at staff meetings.

Standard 5-5: The process that ensures that graduates have completed the requirements of the program must be based on standards, effective and clearly documented procedures. This process must be periodically evaluated to ensure that it is meeting its objectives.

The department ensures that the students are punctual and fulfill the attendance requirement i.e. 75%. Exams are scheduled within the dates marked in the academic calendar. The students are marked and graded and the results are sent to semester examinations section (SES). SES declares the final result. Promotion to the next class is restricted to only those who have cleared more than 80% courses. For each course, the minimum pass marks are 50%. The annual convocation held every year to award degrees to successful students.

CRITERION-6

FACULTY

Criterion-6: Faculty

Standard 6-1: There must be enough full time faculty who are committed to the programme to provide adequate coverage of the programme areas / courses with continuity and stability. The interest of all faculty members must be sufficient to teach all courses, plan, modify and update courses. The majority must hold a Ph.D. degree in the discipline.

With program being maturing gradually there is a dire need to appoint graduates with degree in the field of Poultry Science. However the faculty either permanent or visiting teaching in the program are PhD and /or MPhil qualified. Though the teachers prefer to teach courses of their interest, they can teach all courses and take keen interest in planning, modifying and updating courses.

Standard 6-2: All faculty members must remain current in the discipline and sufficient time must be provided for scholarly activities and professional development. Also, effective programs for faculty development must be in place.

Sufficient academic facilities are available for the faculty members including internet access, through local area network provided by university via PERN, online subscription to research journal and books related to Poultry Science. Research facilities are also available, however funds are insufficient for the maintenance labs. Continuing education programs must be in place for the professional development and progress of faculty.

Standard 6-3: All faculty members should be motivated and have job satisfaction to excel in their profession.

Faculty is partially satisfied with current job circumstances since the program can excel to its maximum if a separate department along with Faculty is being established.

CRITERION-7
INSTITUTIONAL FACILITIES

Criterion-7: Institutional Facilities

Standard 7-1: The Institution must have the infrastructure to support new trends in learning such as E-learning.

a) Departmental library and Internet Facility

Departmental library has around 900 books with around 100 books on poultry science. Effort is being made to acquire latest books. The faculty has access to an e-library as provided by PERN that is very useful for high-quality education and producing international level research but the internet facilities do not exist for students which needs immediate attention and action.

Standard 7-2: The library must possess on up-to-date technical collection relevant to the program and must be adequately staffed with professional personnel.

With the onset of e-library by HEC the department promotes students to use digital library for reading purpose. Moreover the University Central Library has books related to the subject.

Standard 7-3: Class rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibility.

The department has 7 classrooms/halls fully equipped with mobile multimedia. Every faculty has its own furnished office with internet facilities.

CRITERION-8
INSTITUTIONAL SUPPORT

Criterion-8: Institutional Support

The administration of the university has been struggling hard to improve all departments and update departments and set up new faculties and institutes. The university aims to recruit highly skilled professors as well.

Standard 8-1: There must be sufficient support and financial resources to attract and retain high quality faculty and provide the means for them to maintain competence as teacher and scholars.

In order to manage the department, the department currently has limited resources. Moreover, since the last two years, the department has not received adequate amount in term of grant from the university, leading the department to lack of inspiration, passion, devotion and commitment. There is a desperate need for a clear budget to be fixed to streamline the department. The financial support that would be provided to the department will be used to develop computer facilities. In addition, in order to attract and retain high quality faculty, promotion to next cadre according to qualification, experience, academic achievements should be given priority.

Standard 8-2: There must be an adequate number of high quality graduate students, research assistants and Ph.D. Students

NOT APPLICABLE

Student/Faculty Ratio (for the last three years)

15:1

Standard 8-3: Financial resources must be provided to acquire and maintain library holding, laboratories and computing facilities.

As previously stated, there is a shortage of financial support to better manage the seminar library and research labs.

FACULTY CVS

DR. TASEER AHMED KHAN (PhD)

Chairperson
Professor
HEC Approved Supervisor
Department of Physiology
University of Karachi
Karachi-Pakistan
Email: takhan@uok.edu.pk

CAREER OBJECTIVE

To serve the academia in the capacity of mentor to prosper for education and research towards nation building.

RESEARCH INTEREST

- Molecular studies on economically important poultry pathogens in poultry industry of Pakistan.
- Genetic polymorphism studies related various syndrome related to human health.
- Probiotic production for poultry health.
- Use of Chicken embryonated egg as an alternated to study angiogenesis.

EDUCATIONAL BACKGROUND**DOCTORATE**

Ph. D. Physiology from the Department of Physiology, University of Karachi, 2010. Under the supervision of Dr. Shafqat Fatima Rehmani, Executive Director, Sindh Poultry Vaccine Centre, Karachi presently is serving as Associate Professor, WTO Quality Assurance Lab, University of Veterinary and Animal Sciences, Lahore, Pakistan.

Entitled:

Molecular Characterization of Velogenic Viscerotropic Newcastle Disease Virus (VVNDV) in chickens from recent outbreaks in Pakistan.

ACADEMIC EXPERIENCE

S #	Position	Status	Affiliation
1	Professor	April 2023 to date	Department of Physiology, University of Karachi
2	Associate Professor	Mar 2014 – April 2023	Department of Physiology, University of Karachi
3	Assistant Professor	Sep 2010 – Mar 2014	Department of Physiology, University of Karachi
4	Lecturer	Oct 2001- Sep 2010	Department of Physiology, University of Karachi

HONORARY POSITION

Research Officer

January 1999 to October 15, 2001

Sindh Poultry Vaccine Centre

Animal Science Complex, Korangi- Karachi

Responsibility:

- A major contributor in establishing a Molecular Diagnostic Unit at the center.
- Providing technical services to poultry and livestock farmers.
- Designed and defended various research projects at MoST, PSF and PARC for funding.
- Involved in maintaining semi-SPF flocks, for vaccine production by using embryonated eggs and cell culture techniques utilizing primary cell lines.
- Working on Virology / Immunology, Vaccine preparations and determination of its efficacy.
- Worked on virus isolation and preparation of various live and killed vaccines for the emerging poultry diseases.
- Performed routine sera diagnostic test including hemagglutination test, hemagglutination inhibition test, intra cerebral Pathogenicity index, intra venous Pathogenicity index and mean death time.

ADMINISTRATIVE EXPERIENCE

S #	Position	Status	Affiliation
1	Chairman	Jul 2019 -till date	Department of Physiology, University of Karachi
2	Coordinator Evening Program	Apr 2017 – Jul 2019	Department of Physiology, University of Karachi
3	Controller of Examination (Acting)	03 Sep 2018 – 07 Sep 2018	University of Karachi
4	In-charge Semester Examination Section	Nov 2018 – till date	University of Karachi

OTHER RESPONSIBILITIES:

- Tackle day to day matter as chairperson of the department.
- Member post graduate admission committee for M. Phil. and Ph.D. of Department of Physiology
- Member Departmental Research Committee for guiding students for their MS and PhD thesis.
- Teaching at MS and PhD level courses at the department.
- Departmental Student's Advisor, Department of Physiology, University of Karachi.
- Member, Executive Committee of Sardar Yasin Malik Facility for Professional Development, University of Karachi, January 2012 to date.
- Secretary, National Curriculum Revision Committee (NCRC) on Physiology in Higher Education Commission (HEC), Islamabad, 2012 to date.
- Joint Secretary, Pakistan Physiological Society, 2010-2012.

- Member Students Presentation Committee, Annual Convocation 2011, 2012 & 2013 of University of Karachi.
- Member Board of Studies, Department of Physiology, University of Karachi, 2014 till to date.
- Member Board of Faculty, Faculty of Science, University of Karachi, 2001-2006.
- Member Board of Faculty, Faculty of Science, University of Karachi, 2014 till to date.
- Member Karachi University Scholarship Committee.

COURSES TAUGHT

GRADUATE / POSTGRADUATE

- Anatomy and Physiology
- Medical Physiology
- Cell and Molecular Physiology
- General and Pathologic Physiology
- Fundamentals of Pharmacology
- Clinical Pharmacology
- Laboratory Techniques in Physiology and Biophysics
- Biostatistics
- Cardiovascular Physiology
- Gastrointestinal Physiology
- Vaccine Production
- Poultry Housing and Management
- Poultry Economics and Marketing
- Poultry Extension, Poultry Physiology

STUDENTS SUPERVISED (POST GRADUTE / GRADUATE)

S. No.	Name	Title	Degree	Status
1	Faiza Alam	Study of the genetic variant of Sirtuin and the related physiological and biochemical variations in infertile females of Karachi	Ph.D.	Awarded (2019)
2	Safdar Ali Shaikh	Comparative Study on Different Markers of Metabolic Syndrome in Young Population of Sindh, Pakistan	Ph.D.	Awarded (2018)
3	Mehr-un-Nisa	Physiological and molecular studies on breast cancer in pre-menopausal women	Ph.D.	Awarded (2018)
4	Zulfiqar Ahmed	Studies on Effective Control Strategies against Salmonellosis Through the Use Of Probiotics in Poultry	Ph.D.	Awarded (2018)
5	Syeda Sadia Fatima	Interplay of Genetic Polymorphism, Chemerin and Cytokines in Gestational Diabetes In Pakistani Women	Ph.D.	Awarded (2016)
6	Rehana Rehman	Study of some of the clinical, physiological and biochemical changes in embryo implantation.	Ph.D. (Co-supervisor)	Awarded (2013)
7	Aisha Javed	LDL cholesterol, hematological profile	Ph.D.	Awarded

		and other physiological studies in patients with ischemic heart disease.	(Co-supervisor)	(2016)
8	Erum Ashraf	Correlation between Apelin gene polymorphism and serum Apelin levels in patients with coronary artery disease	Ph.D.	On-Going
9	Muhammad Adnan	Vitamin D receptor (VDR) gene polymorphisms and vitamin D levels in diabetic population of Pakistan.	Ph.D.	On-Going
10	Ahsan Ashfaq	Association of SLC11A1 gene Polymorphism, NRAMP-1 protein with Pulmonary TB Susceptibility in Local Population.	Ph.D.	On-Going
11	Soubia Malik	Role of Vitamin D receptor gene polymorphism in Polycystic Ovarian Syndrome	M. Phil.	Awarded (2015)
12	Qurat-ul-Ain	A Study on Crude Extract of Eucalyptus camaldulensis against Atherosclerosis and Hyperlipidemia in <i>Columba livia</i> .	M. Phil	Awarded (2016)
13	Naheed Akhtar	Association of Genetic and Environmental Factors in the Onset of Depression among Pakistani Population	M. Phil	Awarded (2018)
14	Aliya Maqsood	A study on the association between vitamin D, its receptor polymorphisms and antimicrobial peptides in periodontitis.	M. Phil	Awarded (2018)
15	Rabiya Ali	Association of Unexplained Infertility with Ovarian Steroids and Leukemia Inhibitory Factor (LIFR) Genetic polymorphism	M. Phil	Awarded (2018)
16	Uzma Firdous	A study on lipid metabolism and hormone profile in Pakistani women with polycystic ovarian syndrome	M. Phil	Awarded (2019)
17	Nasir Jamil	Immunomodulatory effect of <i>Operculina Turpethum</i> against Newcastle disease virus in chickens	M. Phil	Awarded (2021)
18	Afsheen Illahi	Association of serum Chemerin and Chemerin rs 17173608 gene polymorphism with metabolic syndrome	M. Phil	Awarded (2021)
19	Hira Zameer	A study on Casr gene polymorphism and its role in parathyroid hormone regulation	M. Phil.	On-going
20	Nadia Batool Afridi	Development of PCR assay for <i>Mycoplasma gallisepticum</i>	M. Sc.	Awarded (2011)
21	Sehrish Khan	Effect of Immunomodulator on Avian	M. Sc.	Awarded

		Influenza Vaccine		(2011)
22	Hafiz Abdul Hannan	A study on the efficacy of the Avian <i>E. coli</i> Vaccine	M. Sc.	Awarded (2011)

EXPERIENCE AS EXAMINER

- External examiner for various M.Phil. and PhD thesis.
- External examiner for Anatomy & Physiology Viva exam of DPT program at Ziauddin University.
- External examiner for Anatomy & Physiology Viva exam for the BSc Nursing
- Professional Examination Part I at School of Nursing, Aga Khan University Hospital, Karachi / 2011 to date.
- External examiner OSPE of Pharm-D in the subject of Physiology at Dow University of Health Sciences, Karachi / 2011.

EXPERIENCE AS JOURNAL REVIEWER

Reviewer/Editor of articles in the following journals:

- BioSight
- Clinical Complementary Medicine and Pharmacology
- PlosOne
- Karachi University Journal of Science
- Molecular Biology Reports

INTERNATIONAL COLLABORATION

- Prof. Datin Paduka Dr Khatijah Yusoff, (DSIS, PhD, FASc, FIAS) Faculty of Biotechnology and Biomolecular Sciences, Universiti Putra Malaysia, Malaysia.
- Prof. Datin Paduka Dr. Aini Ideris, (PhD) Institute of BioSciences, Universiti Putra Malaysia, Malaysia.
- Dr. Claudio L Afonso, (PhD), South East Poultry Research Laboratory (SEPRL), United States Department of Agriculture, Athens, Georgia, USA.
- Dr. James A. Roth, (DVM, PhD, DACVM) Institute of International Cooperation in Animal Biologics, Iowa State University, Ames, Iowa, USA.
- Dr. Majid Bouzari (DVM, DVSt., PhD) Department of Biology, Faculty of Science, University of Isfahan, Iran.
- Dr. Seham Abd El-Rasheed Sayed El-Zeedy (PhD) Veterinary Serum and Vaccine Research Institute, Egypt.

RESEARCH PROJECTS

- Principal investigator of a project funded by Higher Education Commission, Islamabad in 2017 on "Role of gene variants in vitamin D metabolism and its signaling pathway in early breast cancer onset". (Completed) amounting Rs. 1.4 million.
- Co-investigator of a project funded by Higher Education Commission, Islamabad in 2015 on "Development of ICT against Avian Mycolplasmiasis". (Completed) amounting Rs. 3.5 million.

- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2018 on "Development of T-ARMS assay against chicken Mx gene" (Completed) amounting Rs. 200,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2017 on "Surveillance of Newcastle disease virus in wild pigeons of Karachi". (Completed) amounting Rs. 150,000-00.
- Principal investigator of a project funded by Higher Education Commission, Islamabad in 2012 on "Strengthening of Research Facilities at the Poultry Research Laboratory Department of Physiology, University of Karachi". (Completed) amounting Rs. 955,000-00.
- Co-investigator in a research project funded by U.S. Department of State, Biosecurity Engagement Program (BEP), in 2011 on "Molecular characterization of Newcastle disease virus and development of approaches to vaccination". (Completed) amounting US \$ 300,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2014 on "Isolation, Identification and Characterization of Salmonella Isolates From Poultry Farms In Karachi". (Completed) amounting Rs. 150,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2012 on "Sero-surveillance of Newcastle disease virus". (Completed) amounting Rs. 200,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2011 on "Efficacy of Avian E. coli Vaccine in Broilers". (Completed) amounting Rs. 125,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2007 on "Isolation and Identification of Newcastle disease virus from recent outbreaks in the suburbs of Karachi". (Completed) amounting Rs. 60,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2006 on "Biological characterization of local isolates of Newcastle disease virus". (Completed) amounting Rs. 60,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2004 on "Pathogenicity evaluation of Newcastle disease virus isolates from suburbs of Karachi". (Completed) amounting Rs. 55,000-00.
- Principal investigator of a research project funded by Dean Faculty of Science, University of Karachi, in 2002 on "Hematology and Blood Biochemistry values of broiler chicks affected with Hydropericardium syndrome in Karachi" (Completed) amounting Rs. 40,000-00.

ORAL PRESENTATION

- Presentation entitled "Effect of Levamisole concentration on the efficacy of inactivated Avian Influenza vaccine (H5N1) in broiler chicks" delivered at the 12 Biennial international conference of Pakistan Physiological Society, King Edward Medical University and CMH Lahore, April 11-12, 2011.
- Presentation entitled "Avian Influenza, Safe Food – A Consumer Perspective" delivered at the 7th National Safe Food Conference 2008 organized by Peek Freans, Pakistan and URS Pakistan on March 19, 2008, at Sheraton Hotel, Karachi.
- Presentation entitled "Hematology and Biochemistry Values in Broiler Chicks Affected with Hydropericardium Syndrome (HPS) In Karachi" delivered at the 9th Biennial international

conference of Pakistan Physiological Society, Ayub Medical College, Abbottabad, Pakistan, April 2-3, 2004.

POSTER PRESENTATION

- Uzma Munir, Taseer Ahmed Khan, Benazir Kanwal, and Shafqat Fatima Rehmani. (2010). Chicken immune response against inactivated vaccine of Escherichia coli prepared using an indigenous isolate from Karachi, Pakistan. Poster presented at international conference of American Society for Microbiology, USA.
- Nazir A. Lone, Shafqat F. Rehmani, Shahana U. Kazmi, Rana Muzaffar, Adnan Khan, Taseer A. Khan, Shakeel A. Khan (2006). Molecular characterization of Pakistani isolates of Infectious Bursal Disease Virus (IBDV). Poster presented at international conference of American Society for Microbiology, USA.

EXPERIENCE AS TRAINER

- Delivered a training session in a three-day workshop on "Ensuring Training effectiveness" organized by Lasbela University of Agriculture, Water and Marine Sciences, Uthal, Baluchistan on 14th June 2012, sponsored by Higher Education Commission, Islamabad.
- Delivered training session in a three-day workshop on "Ensuring Training effectiveness" organized by Dawood College of Engineering and Technology, Karachi on 7th December 2012, sponsored by Higher Education Commission, Islamabad.

PROFESSIONAL TRAININGS / COURSES

- Successfully completed an Afghanistan-Pakistan-USA Tri Lateral Commission Training program entitled "Principles of Thermal Process Control" at KU-ASM Bio-Resource Centre, Department of Microbiology University of Karachi from 3-4 June 2012 organized in collaboration with University of Idaho Moscow, Washington state University funded by United States Department of Agriculture, Foreign Agriculture Services, USA.
- Successfully completed Three (3) weeks "Advanced Faculty Professional Development Program: Ensuring Training Effectiveness" at Asian Institute of Technology-Extension, Thailand from March 7-25, 2011, in collaboration with Higher Education Commission, Islamabad.
- Successfully completed a five (5) day Advanced Specified Course for Master Trainer Faculty Professional Development Program Alumni organized by Learning Innovation Department, Higher Education Commission, Islamabad on "Advance Communication Skills" from November 20, 2009, at the HEC Regional Office, Karachi.
- Successfully completed a Three (3) months Certificate Course organized by Learning Innovation Department, Higher Education Commission, Islamabad in "Teaching & Learning in Higher Education" held from June 27 to September 24, 2005, at Higher Education Commission, Islamabad.
- Successfully completed a five (5) day Teacher's Course under the Intel Teach Program, jointly organized by Learning Innovation Division, Higher Education Commission, Islamabad at Umaer Basha Institute of Information Technology, University of Karachi from September 4th November 25th, 2007.

- Successfully passed all module required for being granted the International Computer Driving License (CORE. Syllabus Version 3) ICDL, UK on 11 October 2005 sponsored by Learning Innovation Division, Higher Education Commission, Islamabad.
- Successfully completed the Learning to Teach with Technology Studio (LTTS) inquiry-based course entitled "Technology-Integrated Science Fairs" in February 2006 from School of Education, Indiana University, USA sponsored by Learning Innovation Division, Higher Education Commission, Islamabad.
- Successfully completed the Learning to Teach with Technology Studio (LTTS) inquiry-based course entitled "Scientific Graphs and Charts" in June 2006 from School of Education, Indiana University, USA sponsored by Learning Innovation Division, Higher Education Commission, Islamabad.
- Successfully completed the Learning to Teach with Technology Studio (LTTS) inquiry-based course entitled "An Example of Health Promotion" in September 2006 from School of Education, Indiana University, USA sponsored by Learning Innovation Division, Higher Education Commission, Islamabad.
- Certificate of completion awarded on May 25th, 2004, on "Avian Disease Prevention Training Course" (Online) by Cooperative Avian Health Program, Garden Grove, California, USA.

TRAINING PROGRAMS ATTENDED

- Participated in a two (2) weeks "Veterinary Biologics Training Program-May 2010" at Institute of International Cooperation in Animal Biologics sponsored by Institute of International Cooperation in Animal Biologics, Iowa State University, United States Department of Agriculture and Centre for Veterinary Biologics, USA.
- Attended a two (2) weeks training program at Southeast Poultry Research Laboratory (SEPR), USDA/ARS, Athens Georgia, USA on the "Newcastle Disease Virus and Avian Influenza Virus" organized by SEPR, USDA/ARS and Biosecurity Engagement Program (BEP), Dept. of State, USA from January 2nd – 16th, 2009.
- Attended one week training program on "Biosafety and Biosecurity" in Bangkok, Thailand sponsored by Biosecurity Engagement Program (BEP), Dept. of State, USA from June 23rd – 28th, 2008.
- Attended a five (5) day training course on The Safety Measures In the use of Radiation in Biology held from February 27, 2006, to March 3, 2006, at Nuclear Institute for Agriculture and Biology (NIAB), Faisalabad sponsored by Pakistan Atomic Energy Commission, Pakistan.

SEMINARS / WORKSHOPS / CONFERENCES ORGANIZED

- Convener 3rd PROBE conference, Department of Physiology University of Karachi held in 2022.
- Convener 2nd PROBE conference, Department of Physiology University of Karachi held in 2020
- Organizing Secretary 1st PROBE conference, Department of Physiology University of Karachi held in 2018.
- Member organizing committee on 2nd and 3rd Annual Research Talk held in Department of Physiology University of Karachi held in 2021.

- Member organizing committee on 1st Annual Research Talk held in Department of Physiology University of Karachi held in 2017.
- Member organizing committee on 2nd Annual Research Talk held in Department of Physiology University of Karachi held in 2018.
- Organized a session entitled "Energy Conservation" on 31st October 2011 at the Department of Physiology, University of Karachi in collaboration with Energy Conservation Department, Karachi Electric Supply Company, Karachi.
- Organized one day seminar on "Cancer: An ongoing life threat" on 26th July 2011 by Department of Physiology, University of Karachi in collaboration with Pakistan Physiological Society.
- Organized a guest speaker session on "A road Map to Kidney Failure", by Dr. Muhammad Arif Tabba, Medical Director, Tabba Kidney Foundation, on 4th October 2011 in Department of Physiology, University of Karachi.
- Member organizing committee on a workshop on "Experimental Physiology Part-1" from May 5-6th, 2006 organized by Department of Physiology, University of Karachi, Higher Education Commission, Islamabad, and AD Instruments Australia.
- Contributed as a Facilitator in a workshop on "Experimental Physiology Part-1" from May 5-6th 2006 organized by Department of Physiology, University of Karachi, Higher Education Commission, Islamabad, and AD Instruments Australia.
- Member organizing committee of "2nd Staff Development Program for Teachers in Higher Education" from 29th May to June 24th, 2006, organized by Human Resource Centre, University of Karachi in collaboration with National Academy of Higher Education sponsored by Higher Education Commission, Islamabad.
- Member organizing committee of "1st Staff Development Program for Teachers in Higher Education" from 12th December 2005 to January 7th, 2006, organized by Human Resource Centre, University of Karachi in collaboration with National Academy of Higher Education sponsored by Higher Education Commission, Islamabad.

SEMINARS / WORKSHOPS / CONFERENCES ATTENDED

- Attended a one-day seminar on "Thalassemia; Precautions and Prevention" on 5th October 2011 organized by Department of Physiology, University of Karachi in collaboration with Omair Sana Foundation, Karachi.
- Attended a one-day seminar on "Obesity: A lifestyle disease?" on 26th April 2011 organized by Department of Physiology, University of Karachi.
- Attended 12th Biennial International Conference of the Pakistan Physiological Society held on April 11 – 12th, 2011 jointly organized by King Edwards Medical University/College, Lahore and CMH, Lahore in collaboration with Higher Education Commission, Islamabad.
- "Avian Mycoplasmosis" held at University of Karachi jointly organized by Department of Environmental Studies, Department of Microbiology and MAH Qadri Biological Research Centre on 22-25th, January 2008.
- Attended the "National Workshop on Techniques in Molecular Biology, Bioinformatics and Vaccine Production" organized by Centre for Advanced Studies in Vaccinology and Biotechnology (CASVAB), Quetta from May 28 – 30th, 2007.

- "Statistical Methods in Research with Special Reference to Applied Biology" at University of Karachi, organized by The Department of Biochemistry in collaboration with PASTIC on 27-29th January 2003.
- "Role of Antibiotics & Vaccines in control of Infectious Diseases" organized by Department of Microbiology, Jinnah University for Women, Karachi on 26th April 2003.
- "PCR application in research and diagnostics" organized by Department of Biochemistry & PSBMB – Rahila Research & Reference Laboratories on 16-18 October 2003.
- Attended a symposium organized by Pakistan Poultry Association on "Operational biosecurity for viral pathogens" at Marriot Hotel Karachi on 3rd July 2002.
- "Animal Cell Culture" at HEJ Research Institute of Chemistry, Karachi. Jointly sponsored by United Nations Development Program / National Talent Pool and Methodist Research Institute, Clarian Health Partners. Inc. Indianapolis USA from December 23rd, 2002 – January 03, 2003.
- Attended a workshop on "Information handling in Biological Research" organized by Department of Biochemistry, University of Karachi in collaboration with PASTIC, Islamabad from 3 - 5 March 2002.
- Attended a seminar on "Role of Youth in the Control of AIDS / Hepatitis A, B, C, and other infectious Diseases" organized by Department of Microbiology in collaboration with Sindh AIDS Control Program, Health Dept. Govt. of Sindh, UNICEF-Pakistan, and Pakistan Society for Microbiology on December 24, 2002, at University of Karachi.
- Participant of a seminar on "Use of Anthrax vaccine in animals" on November 13th, 2001, organized by Pakistan Society for Microbiology, University of Karachi.
- Participated in the seminar organized by American Soybean Association on "Use of Poultry Vaccine in Pakistan" on May 25th, 1999, at Avari Towers, Karachi.
- Attended 10th Biennial International Conference of the Pakistan Physiological Society held on April 7-8th, 2006 at Liaquat University of Medical Sciences, Jamshoro, Sindh in collaboration with Higher Education Commission, Islamabad.
- Attended 9th Biennial International Conference of the Pakistan Physiological Society held on April 2-3rd, 2004 at Ayub Medical College, Abbottabad.

PUBLICATIONS (*h*-index = 16; Citation = 1128; Impact Factor > 40)

- Binte Zehra, Ayaz Ahmed, Ajmal Khan, Afshan Shams, Reaz Uddin, Sidra Rafi, Taseer Ahmed Khan, Umar Farooq, Syed Abid Ali "Sesquiterpene from *Polygonum barbatum* Disrupt Mitochondrial Membrane Potential to Induce Apoptosis and Inhibits Metastasis by Downregulating Matrix Metalloproteinase and Osteopontin in NCIH460 Cells (2022)" *Naunyn-Schmiedeberg's Archives of Pharmacology* (IF = 3.195).
- Shazia Nazar, Taseer Ahmed Khan, Sitwat Zehra "Association of promoter region A-1012G polymorphism (rs4516035) of vitamin-D receptor gene with coronary artery disease (2022)" *Journal of Pakistan Medical Association*, 72(6), 1137-1141. (IF = 1.002)
- Fakhur Uddin, Syed Hadi Imam, Saeed Khan, Taseer Ahmed Khan, Zulfiqar Ahmed, Muhammad Sohail, Ashraf Y Elnaggar, Ahmed M Fallatah, Zeinhom M El-Bahy. (2021) NDM Production as a Dominant Feature in Carbapenem-Resistant Enterobacteriaceae Isolates from a Tertiary Care Hospital. *Journal of Antibiotics*. DOI: 10.3390/antibiotics11010048. (IF=5.222).

- Rabiya Ali, Mehir un-Nisa Iqbal, Rehana Rehman, Taseer A. Khan. (2021) Association of novel stop-gained leukaemia inhibitory factor receptor gene (rs121912501) variant, leukaemia inhibitory factor and ovarian steroids with unexplained infertility among Pakistani women. *International Journal of Clinical Practice*. <https://doi.org/10.1111/ijcp.14245> (IF=3.149)
- Naheed Akhter, Mehir un-Nisa Iqbal, Aliya Maqsood, Safdar Ali Sheikh, Anwar Ali and Taseer Ahmed Khan. (2021) Association of BDNF and SERT gene polymorphisms with depression among Pakistani population. *Pak. J. Pharm. Sci.*, 34 (1), 103-110 (IF=0.863)
- Faiza Alam, Rehana Rehman, Syeda Sadia Fatima, Mussarat Ashraf, Taseer Ahmed Khan (2021). Suggested role of silent information regulator 1 (SIRT1) gene in female infertility: A cross-sectional study in Pakistan. *International Journal of Clinical Practice*. <https://doi.org/10.1111/ijcp.14132> (Impact Factor: 3.149).
- Faiza Alam, Taseer Ahmed Khan, Rabiya Ali, Fizza Tariq, Rehana Rehman (2020). SIRT1 and cortisol in unexplained infertile females; a cross sectional study, in Karachi Pakistan. *Taiwanese Journal of Obstetrics and Gynecology*. 59 (2): 189-194. (IF=1.944).
- Zulfiqar Ahmed, Muhammad Sufyan Vohra, Muhammad Noman Khan, Ayaz Ahmed, Taseer Ahmed Khan (2019). Antimicrobial role of Lactobacillus species as potential probiotics against enteropathogenic bacteria in chickens. *Journal of Infection in Developing Countries*. 13(2):130-136.
- Faiza Alam, Taseer Ahmed Khan, Sofia Amjad, Rehana Rehman (2019). Association of oxidative stress with female infertility - A case control study. *Journal of Pakistan Medical Association*. 69: 627-631. (IF: 1.002).
- Mehir un-Nisa Iqbal, Tahniyat Yaqoob, Syed Adnan Ali, and Taseer Ahmed Khan (2019). A Functional Polymorphism (rs6265, G>A) of Brain Derived Neurotrophic Factor Gene and Breast Cancer: An Association Study. *Breast Cancer: Basic and Clinical Research*. 13: 1–5 (IF=2.22)..
- Mehir un-Nisa Iqbal, Syed Amir Maqbool and Taseer Ahmed Khan (2018). Association of low penetrance vitamin D receptor Tru9l (rs757343) gene polymorphism with risk of premenopausal breast cancer. *Journal of International Medical Research*. 46(5) 1801-1814. (Impact Factor: 1.573)
- Faiza Alam, Taseer Ahmed Khan, Rehana Rehman (2018). Stress of infertility: Can the couple cope? *J Pak Med Assoc*. 68 (4) 679-680. (Impact Factor:1.002).
- Shazia A. Ansari, Mehir un-Nisa Iqbal, Taseer A. Khan, Shahana U. Kazmi (2018). Association of oral Helicobacter pylori with gastric complications. *Life Sciences*. 205: 125–130. (Impact Factor: 6.78).
- Muhammad, F., Hussain J., Fareed S.K., Ahmed Khan, T., Ahmed Khan S., Ahmad A. (2018). Diagnosis of Avian Mycoplasmas: A Comparison between PCR and Culture Technique. *Archives of Razi Institute*, 73(3): 239-244. (Impact Factor: 0.18)
- Shajeela Iram, Syed Khurram Fareed, Taseer Ahmed Khan, Tanveer Abbas, Maimoona Chaudhary, Mehir un-Nisa Iqbal, Rubina Ghani (2019). Identification of Aspergillus flavus and aflatoxin in home mix layer poultry feed in relation to seasons in Karachi, Pakistan. *Tropical Animal Health and Production*. <https://doi.org/10.1007/s11250-019-01818-0>. (Impact Factor: 1.893)
- Ghulam Abbas, Muhammad Kashif, Mudassar, Taseer Ahmed Khan, Huma Aslam Bhatti, Sayedul Haque, Sabira Naqvi and Ahsana Dar Farooq (2018). Cytotoxic, embryotoxic,

insecticidal and anti-microbial activities of standardized Areca catechu nut. *Pak. J. Pharm. Sci.*, 31 (2) 385-392. (Impact Factor: 0.863)

- Mehir un-Nisa Iqbal and Taseer Ahmed Khan (2017). Association between Vitamin D receptor (Cdx2, Fok1, Bsm1, Apa1, Bgl1, Taq1, and Poly (A)) gene polymorphism and breast cancer: A systematic review and meta-analysis. *Tumor Biology*. doi:10.1177/1010428317731280. (Impact Factor: 3.650)
- Faiz Muhammad, Syed Khurram Fareed, Urooj Zafar, Taseer Ahmed Khan and Aqeel Ahmad (2017). Development and Evaluation of Culture Enhanced Tetra-PCR for Differential Diagnosis of *Mycoplasma gallisepticum* and *M. synoviae*. *Pakistan Journal of Zoology*. 49(6): 2133-2140. (Impact Factor: 0.547)
- Syeda Sadia Fatima, Rehana Rehman, Faiza Alam, Sarosh Madhani, Bushra Chaudhry, Taseer Ahmed Khan (2017). Gestational diabetes mellitus and the predisposing factors. *Journal of Pakistan Medical Association*, 67: 261. (Impact Factor: 1.082).
- Syed Khurram Fareed, Khalid Hussain Memon, Allah Bux Kachiwal, Shajeela azhar, Muhammad Iqbal Brula, Mehmood-ul-Hasan, Muhammad Ali, Taseer Ahmed Khan (2016). Prevalence and economic losses of reproductive disorders and mastitis in buffaloes at Karachi, Pakistan. *Indian Journal of Animal Research*. doi: 10.18805/ijar.8602. (Impact Factor: 0.044)
- Fatima SS, Chaudhry B, Khan TA, Farooq S. (2016). KCNQ1 rs2237895 polymorphism is associated with Gestational Diabetes in Pakistani Women. *Pak J Med Sci*. 32(6):1380-1385. doi: <https://doi.org/10.12669/pjms.326.11052> (Impact Factor: 0.544)
- Syeda Sadia Fatima, Rehana Rehman, Zoya Butt, Maida Asif Tauni, Tazeen Fatima Munim, Bushra Chaudhry, Taseer Ahmed Khan (2015). Screening of subclinical hypothyroidism during gestational diabetes in Pakistani population. *The J. Maternal-Fetal & Neonatal Med*. doi: 10.3109/14767058.2015.1077513. (Impact Factor: 2.323)
- Rehana Rehman, Syeda Sadia Fatima, Mehwish Hussain, Rakhshaan Khan, Taseer Ahmed Khan (2015). Effect of endometrial thickness on pregnancy outcome after intracytoplasmic sperm injection. *J. Pak. Med. Assoc.*, 65(5):448-451. (Impact Factor: 0.403)
- Mehr un-Nisa Iqbal, Taseer Ahmed Khan, Syed Amir Maqbool (2015). Vitamin D receptor Cdx2 polymorphism and premenopausal breast cancer risk in Southern Pakistani Patients. *PlosOne*, doi: 10.1371/journal.pone.0122657. (Impact Factor: 3.534)
- Patti J. Miller, Ruth Haddas, Luba Simanov, Avishay Lublin, Shafqat Fatima Rehmani, Abdul Wajid, Tasra Bibi, Taseer Ahmad Khan, Tahir Yaqub, Surachmi Setiyaningsih, Claudio L. Afonso (2015). Identification of new sub-genotypes of virulent Newcastle disease virus with potential panzootic features. *Infection, Genetics and Evolution*, 29: 216229. (Impact Factor: 3.264)
- Shazia Akbar Ansari, Adnan Khan, Taseer Ahmed Khan, Yasir Raza, Sofia Ali Syed, Syed Shakeel Akhtar and Shahana Urooj Kazmi (2015). Correlation of ABH blood group antigens secretion with *Helicobacter pylori* infection in Pakistani patients. *Tropical Medicine & International Health*. doi: 10.1111/tmi.12401. (Impact Factor: 2.302).
- Syeda Sadia Fatima, Rehana Rehman, Mukhtiar Baig, Taseer Ahmed Khan (2014). New roles of the multidimensional adipokine: Chemerin. *Peptides*, 62: 15-20. (Impact Factor: 2.614).

- Muhammad Noman Khan, Taseer Ahmed Khan and Zulfiqar Ahmed. (2013). Discrepancy in ABO Blood Grouping. *Journal of the College of Physicians and Surgeons Pakistan*, 23 (8): 590-592. (Impact Factor: 0.318).
- Nazir Ahmed Lone, Shafqat Fatima Rehmani, Taseer Ahmed Khan, and Shahana Urooj Kazmi. (2012). Efficacy of Live attenuated and Inactivated Oil Emulsion Infectious Bursal Disease Virus Vaccines in Broiler chicks. *Pak. Vet J*, 32(4) 539-542. (Impact Factor: 1.392)
- Jamie L. Wasilenko, Mary Pantin-Jackwood, Taseer Ahmed Khan, Ayaz Ahmed, Shafqat F. Rehmani, Nazir Ahmed Lone, David E. Swayne and Erica Spackman. (2012). Characterization of H5N1 highly pathogenic avian influenza viruses isolated from poultry in Pakistan 2006–2008. *Virus Genes*, 44:247-252. (Impact Factor: 1.837).
- Taseer Ahmed Khan, Shafqat Fatima Rehmani, Ayaz Ahmed, Nazir Ahmed Lone and Muhammad Noman Khan. (2012). Characterization of Newcastle disease virus isolated during 1995-2009 from suburbs of Karachi-Pakistan. *Pakistan J. Zool*, 44 (2): 443-448. (Impact Factor: 0.400)
- Taseer Ahmed Khan, Cary A. Rue, Shafqat Fatima Rehmani, Ayaz Ahmed, Jamie L. Wasilenko, Patti J. Miller, and Claudio L. Afonso. (2010). Phylogenetic and biological characterization of Newcastle disease virus isolates from Pakistan. *Journal of Clinical Microbiology*, Vol 48, No 5, 1982-1984. (Impact Factor: 11.677)
- Nazir A. Lone, Shafqat F. Rehmani, Shahana U. Kazmi, Rana Muzafar, Taseer A. Khan, Adna Khan, Ayaz Ahmed and Shakeel A. Khan. (2009). Molecular characterization of Pakistani isolates of Infectious Bursal Disease Virus (IBDV). *Avian Diseases*, 53 (2): 306–309. (Impact Factor: 1.107)
- Ayaz Ahmed, Taseer A. Khan, Benazir Kanwal, Yasir Raza, Muhammad Akram, Shafqat F. Rehmani, Nazir A. Lone and Shahana U. Kazmi (2009). Molecular Identification of Agents Causing Respiratory Infections in Chickens from Southern Region of Pakistan during October 2007 to February 2008. *International Journal of Agriculture and Biology*, 11 (3): 325-328. (Impact Factor: 0.902)
- Seema S., Shafqat F. Rehmani, Anwar A. Siddiqui, Masood A. Qureshi, and Taseer A. Khan (2009). Characterization of avian adenovirus type-4 causing hydro-pericardium syndrome in broilers in Karachi, Pakistan. *Iranian Journal of Veterinary Research*, 10, 1 (26): 38-43. (Impact Factor: 0.217)
- Qurat-ul-ain, Ayaz Ahmed, Mehir un nisa Iqbal, Imran Ali Hashmi, Nazish Iqbal Khan, Taseer Ahmed Khan. (2021) Clearing the Clutter: Antiatherosclerotic activity of *Eucalyptus camaldulensis* crude extract. *Pakistan journal of Pharmaceutical Sciences*. DOI: 10.36721/PJPS.2021.34.6.REG.2205-2211.1 (IF = 0.863)

WITHOUT IMPACT FACTOR

- Ahsan Ashfaq, Taseer Ahmed Khan and Syeda Sadia Fatima (2021) Divalent Metal Ions; Key factor towards Pulmonary Tuberculosis. *Annals Of Abbasi Shaheed Hospital and Karachi Medical & Dental College*. 26(4) 186-191.
- S Nazar, TA Khan, S Zehra. (2021) Association of promoter region A-1012G polymorphism (rs4516035) of vitamin-D receptor gene with coronary artery disease. *Journal of the Pakistan Medical Association*. <https://doi.org/10.47391/JPMA.3588>.

- F Alam, H Syed, S Amjad, M Baig, TA Khan, R Rehman. (2021) Interplay between Oxidative stress, SIRT1, Reproductive and Metabolism Functions. *Current Research in Physiology*.4: 119-124.
- Aisha Javaid, Sumera Sohail, Taseer Ahmed Khan, Huma Zahir, and Zahir Hussain (2019). Ischemic heart disease and obesity: plasma lipids, homocysteine, and hematological studies. *Int. J. Biol. Biotech.*, 16 (1): 49-58.
- Sumera Sohail, Aisha Javaid, Taseer Ahmed Khan, Huma Zahir, and Zahir Hussain (2019). Diabetes Mellitus, Obesity and adipocytokines: Pathophysiological Perspectives. *Int. J. Biol. Biotech.*, 16 (2): 325-339.
- Soubia Malik, Aliya Maqsood, Mehir-un-Nisa Iqbal, Taseer Ahmed Khan (2018). Disparate relationship of vitamin d receptor Cdx2 gene Polymorphism and polycystic ovarian syndrome. *Pak J Physiol*. 14(4): 18-20
- Zulfiqar Ahmed, Ayaz Ahmed and Taseer Ahmed Khan (2018). Evaluation of adhesive properties of lactobacillus species in Term of hydrophobicity, auto-aggregation and coaggregation Isolated from chickens. *Int. J. Biol. Biotech.*, 15 (3): 443-451.
- Mehir un-Nisa Iqbal, Aqsa Khan, Taseer Ahmed Khan (2017). Impact of fast-food consumption on lipid profile, Gonadotropin, and prolactin levels in young females. *Pak J Physiol*. 13(3): 26-28.
- Soubia Mallick, Mehir-un-Nisa Iqbal and Taseer Ahmed Khan (2017). Genetic polymorphisms of vitamin D receptor in polycystic ovarian syndrome: A case control study. *Int. J. Biol. Biotech.*, 14 (2): 195-201.
- Ruqaiya Hasan, Mahmood Ahmad and Taseer Ahmed Khan (2017) Growth and Metamorphosis Inhibiting Effects of Exogenous Hydrocortisone on *Duttaphrynus Melanostictus* (Schneider, 1799) Tadpoles: A Preliminary Look to Global Population Decline of Amphibians. *Int. J. Biol. Biotech.*, 14 (4): 531-538.
- Muhammad Waqas, Ghazanfar Ullah, Abdul Aziz Khakwani, Ejaz Ahmad Khan, Kashif Waseem and Taseer Ahmed Khan (2017). Effects of fertilizers (NPK) on growth indices, yield and quality of hybrid sunflower. *Int. J. Biol. Biotech.*, 14 (1): 101-107.
- Bibi Zainab, AsadUllah, Zunera Tanveer, Muhammad Umar, Farah Sabeen Bugti, Muhammad Naeem, Taseer Ahmed Khan, Azam Jan, M. M. Tariq Kiani, Saad Ullah Jan, Ferhat Abbas and Mohammad Zahid Mustafa (2017). Serologic detection of proteins associated with rheumatoid Arthritis patients by sodium dodecyl sulphate-polyacrylamide Gel electrophoresis (SDS-PAGE). *Int. J. Biol. Biotech*, 14 (1): 11-15.
- Abdul Wajid, Asma Basharat, Taseer Ahmed Khan, Muhammad Wasim, Shafqat Fatima Rehmani. (2017) Complete Genome Sequence of a Velogenic Newcastle Disease Virus Strain Isolated from a Clinically Healthy Exotic Parakeet (*Melopsittacus undulates*). *Genome Announc* 5: e01581-16. <https://doi.org/10.1128/genomeA.01581-16>
- Safdar Ali Sheikh, Sitwat Zehra and Taseer Ahmed Khan (2016). High-sensitivity C reactive protein and uric acid as potential markers of metabolic syndrome in a section of Southren Pakistani population. A pilot study. *Medical Channel*. 22(3): 57-64.
- Tahir Hameed, Mohammad Zahid Mustafa, Farhat Abbass Bukhari, Nadeem Rashid, Irshad Ali, Zia-ud-Din, Babar Hilal, Asadullah and Taseer Ahmed Khan (2016). Frequency of bacterial and viral diseases, and morbidity in Broiler breeder strains: A major farmer problem. *Int. J. Biol. Biotech*, 13(2):217-222. 16

- Qurat-ul-Ain, Taseer Ahmed Khan, Tuba Mobeen (2016). A study to evaluate the prevalence of chronic secondary illnesses in diabetic patients. *J. Agric. Basic Sci.*, 01(2):6063.
- Mehr un-Nisa Iqbal, Nida Fatima, Taseer Ahmed Khan, Ayaz Ahmed and Nazir Ahmed Lone (2015). Lack of association between vitamin D receptor FokI polymorphism and urinary tract infection among Karachi population. *Int. J. Biol. Biotech*, 12(4):515-520.
- Mehr un-Nisa, Safoora Ahmed Khan, Saqib Hussain Ansari, Taseer Ahmed Khan (2014). Association of exon 2 vitamin D receptor (FokI) gene polymorphism among Thalassemic patients in Karachi. *Int. J. Biol. Biotech*, 11(4):451-457.
- Taseer Ahmed Khan, Muhammad Noman Khan, Ruqaiya Hasan, Habib Fatima and Einas Kousar (2013). Effects of *Nigella sativa* (Black Seed) on Serum Levels of Urea and Uric Acid in Acetaminophen Induced Hepatotoxicity of Commercial Layer Chickens. *J. World Poultry Res.* 3 (4): 89-92.
- Shabbir Hussain, Zulfiqar Ahmed, Muhammad Noman Khan, and Taseer Ahmed Khan (2013). A study on quality traits of chicken eggs collected from different areas of Karachi. *Sarhad J. Agric.* 29 (2): 255-259.
- H. Abdul Hannan, Taseer A. Khan, M. Noman Khan, and Zulfiqar Ahmad (2012). A study on the efficacy of inactivated avian *E. coli* vaccine in layer chicks. *International Journal of Biology and Biotechnology*, 9(1-2): 55-58.
- Amit Khan, Zulfiqar Ahmad, Kamran Nazir, Muhammad Noman Khan, Farhat Iqbal and Taseer Ahmed Khan (2011). A study on perception evaluation of Pakistani population against Influenza A (H1N1). *International Journal of Biology and Biotechnology*. 8 (3): 427432.
- Taseer Ahmed Khan and Farhat Zafar (2005). Hematological study in response to varying doses of Estrogen in Broiler Chickens. *International Journal of Poultry Science* 4 (10): 748-751.
- Farhat Zafar, Kamran Nazir, Anwar Ali, Taseer Ahmed Khan (2004). A study on the calcium and phosphorous deficiency in broiler flocks of Karachi region. *Intl. Chem. Pharm. Med. J.* 2: 97-98.
- T. A. Khan, A. Hasan, K. Nazir. (2004) Blood analysis of broiler chicks affected with Hydropericardium syndrome (HPS) in Karachi. *International Journal of Biology and Biotechnology*. 1 (4): 635-639.
- Taseer Ahmed Khan (2003). A study on growth performance of the broiler on a balanced feed. *Pakistan Poultry*. October, pp. 15.
- Farhat Zafar, T. A. Khan, K. R. Khan, K. Nazir. (2002). Effect of electrolyte on heat distressed broilers at various temperatures. *Karachi University Journal of Science*. 30 (12): 17, 15-18.
- Zafar, F., Khan, T.A., Nazir, K., Yasmeen, N. (2000). A study to assess the hemoglobin concentration of the broilers at different ages, fed on a commercial diet. *Farm Scientist*, Vol. 5, October, pp. 17-18.
- Zafar, F., T. A. Khan, K.R. Khan. (2000). A review on poultry nutrition. *Farm Scientist*. February 25-27.
- Ammar Asem Al-Hanbeli, Shafqat Fatima Rehmani, Rahmatullah Rind, Nazir Ahmad Lone, Taseer Ahmed Khan. In Ovo vaccination of chicken embryos with local Pakistani strain of Newcastle disease. (Submitted for publication to the *Avian Diseases Journal*)
- Taseer Ahmed Khan, Ayaz Ahmed, and Shafqat Fatima Rehmani. (2011). Effect of levamisole concentration on the efficacy of inactivated avian influenza vaccine (H5N1) in

- broiler chicks. Abstract published in 12 Biennial international conference of Pakistan Physiological Society, King Edward Medical University and CMH Lahore, April 11-12, 2011.
- Savanur, A, Rifat, H, Azeem, M.A., Taseer A. Khan, Erum Y. & Shaikh, H.A. (2011) Physiological responses of caffeine on smooth muscle: a study on rabbit and uromastix. Abstract published in 12 Biennial international conference of Pakistan Physiological Society, King Edward Medical University and CMH Lahore, April 11-12, 2011.
 - Hina Pareen, Arifa Savanur, Taseer Ahmed Khan and M. Abdul Azeem. Effect of different temperature on superoxide production of gastrocnemius muscle of uromastix. Abstract published in 12 Biennial international conference of Pakistan Physiological Society, King Edward Medical University and CMH Lahore, April 11-12, 2011.
 - Ammar Asem Al-Hanbeli, Shafqat Fatima Rehmani, Rahmatullah Rind, Nazir Ahmad Lone, Kausar Mehmood, Taseer Ahmed Khan. (2004). In-Ovo vaccination of chicken embryos with local Pakistani strain of Newcastle disease. Abstract published in 9th Biennial Int. Conf. of the PPS. 2-3rd April 2004, Ayub Medical College, Abbottabad, Pakistan: pg. 46.
 - F. Zafar, T. A. Khan, and Shaikh. A. Rasool. (2004). Studies on Layer birds with reference to poultry feed and improved Bio-safety measures. Abstract published in 9th Biennial Int. Conf. of the PPS. 2-3rd April 2004, Ayub Medical College, Abbottabad, Pakistan: pg. 52.
 - Khan, T.A., Ali, A., Hassan, Atiq ul and Nazir, K. (2004). Hematology and Biochemistry of broilers affected with Hydropericardium syndrome in Karachi. Abstract published in 9th Biennial Int. Conf. of the PPS. 2-3rd April 2004, Ayub Medical College, Abbottabad, Pakistan: pg. 44.
 - Zafar, F., Khan, T.A., Nazir, K. (2000). Effect of electrolyte on heat distressed broilers at various temperatures. Abstract published on 7th April 2000, Department of Physiology, University of Karachi, Pakistan: pp. 65.

ZULFIQAR AHMED (M.Phil. & Ph.D.)

Assistant Professor

Department of Physiology

University of Karachi

Karachi-Pakistan

Email: zuahmed@uok.edu.pk

CAREER OBJECTIVE

To serve the academia to prosper education and research towards nation building.

PROFESSIONAL EXPERIENCE

May 19, 2011 to date

Assistant Professor

Department of Physiology

University of Karachi-Karachi

- Research interest involves action of probiotics on economically important poultry pathogens in poultry industry.
- Member post graduate admission committee for M.Phil and PhD of Department of Physiology
- Member Departmental Research Committee for guiding students for their MPhil/MS and PhD thesis.
- Teaching at MPhil level courses at the department.

June 14, 2006 to May 18, 2011

Lecturer

Department of Physiology

University of Karachi-Karachi

- Research interest involves effect of egg weight on fertility and hatchability in layer and broiler breeders.
- Member Departmental Research Committee for guiding students for their M.Phil/MS thesis.
- Engaged in teaching various graduate and postgraduate level courses.
- Contributed towards designing new courses and lab experiments for both graduate and Post-graduate levels.
- Supervised and conducted research projects at Master's level.
- Tabulator at Semester Examination Section, University of Karachi.

July 2002 to June 13, 2006

Cooperative Teacher

Department of Physiology

University of Karachi

- Engaged in teaching various graduate and postgraduate level courses.

July 16 2010 to December 31, 2010
July 18 2011 to December 31, 2011
Visiting Faculty Member

Department of Biotechnology
University of Karachi

July 18, 2011 – 31-12-2011
Subject taught Medical Physiology

COURSES TAUGHT

GRADUATE Anatomy and Physiology, Cell and Molecular Physiology, General and Pathologic Physiology.

POST GRADUATE Advanced Cell Physiology, Cardiovascular Physiology, Gastrointestinal Physiology, Nephro Physiology, Physiology of Respiration, Bio-Statistics, Poultry Economics and Marketing, Poultry Extension, Poultry Physiology, Poultry Nutrition, Incubation & Hatching Practice

ADMINISTRATIVE EXPERIENCE

- Focal Person to QEC (Quality Enhancement Cell) University of Karachi
- Organized orientation session for the new comers.

OFFICIAL RESPOSIBILITIES

1. Member Board of Faculty, Faculty of Science, University of Karachi. 2011-2013
2. Students Presentation Committee, Annual Convocation 2019 & 2022 of University of Karachi.

EXPERIENCE AS SUPERVISOR

POST GRADUATE LEVEL

S.NO.	NAME	TITLE	DEGREE	YEAR OF AWARD
1	Tabassum Fatima	Studies on the effect of Probiotics Supplementation on Growth Performance and Biochemical parameters of Broiler Chickens	M.Phil.	In Progress
2	Ramsha Shahbaz	Studies on the probiotic properties of lactobacillus isolated from chickens.	M.Sc.	2019
3	Muniba	A study on molecular characterization of Avian pathogenic E.Coli. associated with Mycoplasmosis.	M.Sc.	2019

4	Sania Shaikh	To evaluate the nephroprotective effect of Vitamin A and Vitamin B (B1, B6, B12) against benzene-toluene induced nephrotoxicity in broiler chicks.	M.Sc.	2018
5	Syeda Durreshahwar Fatima	Protective effect of vitamin A and B against vapor of Benzene and Toluene mixture induce hepatotoxicity in broiler chicks. (2018)	M.Sc.	2018
6	Fatima Shabbir	A study on the effect of Monosodium Glutamate (MSG) on the selected biochemical parameters of liver and kidney of the chick.	M.Sc.	2018
7	Shabbir Hussain	Comparison of the egg quality characteristics between commercial and indigenous chickens.	M.Sc.	2011

EXPERIENCE AS CO-SUPERVISOR

S.NO.	NAME	TITLE	DEGREE	YEAR OF AWARD
1	Hafiz Abdul Hannab	A study on the efficacy of the Avian E. coli Vaccine	M.Sc.	2011

AWARD of Ph.D. SCHOLARSHIP IN 2014

- Indigenous Ph.D. Scholarship awarded in 2014 by Higher Education Commission Pakistan (HEC), Islamabad, Pakistan

RESEARCH PROJECTS

- Karachi University Research Project (KURP) Dean's Research Grant. 2021-22. Amount Rs. 150000/-. Entitled "Development of effective control strategies against poultry infections Salmonella and E.Coli. through the use of probiotic's".
- Research Project, Funded by Dean Faculty of Science, 2012-2013, Amount Rs. 80,000.00. Entitled "Isolation and identification of probiotic cultures from broiler fecal samples".
- Research Project, Funded by Dean Faculty of Science, 2011-2012, Amount Rs. 50,000.00. Entitled "Evaluation of egg quality traits and growth performance in chicken".

- **Research Project**, Funded by Dean Faculty of Science, 2009-2010, Amount Rs. 70,000.00 Entitled “The effect of variation in environmental temperature on production and biochemical parameters in chickens”
- **Research Project**, Funded by Dean Faculty of Science, 2007-2008, Amount Rs. 60,000.00 Entitled: “The effect of supplementation of Neem (*Azadirachta Indica*) leaf meal on growth performance, hematology and serum biochemistry of broiler chickens”

ORAL PRESENTATION

1. **Effect of environmental temperature on feed intake, egg production and egg weight of commercial layer.**
35th All Pakistan Science Conference. Genomics for Health & Prosperity. University of Karachi. Pakistan Society for Microbiology, Pakistan Association for the Advancement Association. December 20 – 23, 2008, Karachi, Pakistan.

POSTER PRESENTATION

1. **Use of orange By-Products in Poultry Ration.**
Faraht Zafar, Zulfiqar Ahmed & S. Sadiqa Rizvi
35th All Pakistan Science Conference. Genomics for Health & Prosperity. University of Karachi. Pakistan Society for Microbiology, Pakistan Association for the Advancement Association. December 20 – 23, 2008, Karachi, Pakistan.
2. **A comparative study on effect of plant protein based and animal protein based feed on few biochemical parameters of layer chickens.**
8th Biennial National Conference of Pakistan Society of Biochemistry, Emerging Trends in Biochemistry and Molecular Biology, Department of Biochemistry, University of Karachi.

RESEARCH PUBLICATIONS

TOTAL IMPACT FACTOR: 9.018

1. Fakhur Uddin, Syed Hadi Imam, Saeed Khan, Taseer Ahmed Khan, **Zulfiqar Ahmed** Muhammad Sohail, Ashraf Y. Elnaggar, Ahmed M. Fallatah and Zeinhom M. El-Bahy (2021). NDM Production as a Dominant Feature in Carbapenem-Resistant Enterobacteriaceae Isolates from a Tertiary Care Hospital. *Antibiotics* 2022, 11, 48. doi.org/10.3390/antibiotics11010048 (**Impact Factor = 4.639**)
2. **Zulfiqar Ahmed**, Muhammad Sufyan Vohra, Muhammad Noman Khan, Ayaz Ahmed, Taseer Ahmed Khan (2019). Antimicrobial role of *Lactobacillus* species as potential probiotics against enteropathogenic bacteria in chickens. *J Infect Dev Ctries* 2019 13 (2): 130-136 doi: 10.3855/jidc. 10542. (**Impact Factor = 1.353**)
3. **Zulfiqar Ahmed**, Ayaz Ahmed and Taseer Ahmed Khan (2018). Evaluation of adhesive properties of *Lactobacillus* species in term of Hydrophobicity, auto-aggregation and co-aggregation isolated from chickens. *Int. J. Biol. Biotech.*, 15(3): 443-451, 2018.

4. Khan MN, Khan TA, **Ahmed Z. (2013)**. Discrepancy in ABO blood grouping. *J Coll Physicians Surg Pak.* 2013 Aug. 23(8): 590-2. Doi: 08.2013/JCPSP.590592. (**Impact Factor = 0.56**)
5. Shabbir Hussain, **Zulfiqar Ahmed**, Khan, M.N. Khan, T.A. (2013). A study on the quality traits of chicken eggs collected from different areas of Karachi. *Sarhad Journal of Agriculture* 2013 Vol.29 No.2 pp.255-259 ref.25.
6. H. Abdul Hannan, Taseer A. Khan, M. Noman Khan and **Zulfiqar Ahmed (2012)**. A study on the efficacy of inactivated avian E.coli. vaccine in Layer chicks. *Int. J. Biol. Biotech*, 9(1-2): 55-58, 2012.
7. Amit Khan, **Zulfiqar Ahmed**, Kamran Nazir, Muhammad Noman Khan, Farhat Iqbal and Taseer Ahmed Khan (2011). A study on perception evaluation of Pakistani population against influenza A (H1N1). *Int. J. Biol. Biotech.* 8(3): 427-432, 2011.
8. Mahmood Ahmad, Mansoor Ahmad, Ruqaiya Hasan, Anila Qureshi and **Zulfiqar Ahmed (2006)**. The effect of mefenamic acid on hematocrit of the lizard, *Uromastix hardwickii*. *Pak. J. Pharm. Sci.*, 2006. Vol. 19 (1), 44-48. (**Impact Factor = 0.804**).
9. Mahmood Ahmad, Ruqaiya Hasan, Anial Qureshi, Mansoor Ahmad and **Zulfiqar Ahmed (2005)**. The effect of mefenamic acid on the Osmotic Fragility of lacertilian erythrocytes. *Pak. J. Pharm. Sci.* Vol. 18. No. 2. April 2005. pp 14-18. (**Impact Factor = 0.804**)
10. Mahmood Ahmad, Ruqaiya Hasan, Mansoor Ahmad, Anila Qureshi, **Zulfiqar Ahmed** and Shama Masroor (2005). The effect of mefenamic acid on the blood hemoglobin of the lizard, *Uromastix hardwickii*. *Pak. J. Pharm. Sci.* Vol. 18. No. 4. October 2005. pp 41-45. (**Impact Factor = 0.804**).
11. Mahmood Ahmad, Ruqaiya Hasan, Mansoor Ahmad, Anila Qureshi and **Zulfiqar Ahmed (2005)**. The mode of action of Acetylsalicylic acid on pigeon crop sac Prolactin receptors. *Journal of Basic and Applied Sciences.* Vol. 1. No. 2. 77 – 79. 2005.
12. Zafar F., M. Idrees and **Z. Ahmed (2005)**. Use of Apple by-products in Poultry rations of Broiler chicks in Karachi city. *Pak. J. Physiol.* 2005, 1 (1-2). pp. 32-34.
13. **Zulfiqar Ahmed (2009)**. Increasing threat of Swine Influenza in Pakistan. *The Farm Scientist.* Vol. XVIII No. 3. June 2009
14. Zafar F., **Z. Ahmed** and M.M. Idrees. (2005). A review on the use of Antibiotics in Animal Feed. A Growing Public Health Hazard All Over the World. *Farm Scientist.* Feb. 2005, pp. 9 – 12.
15. **Zulfiqar Ahmed**, Farhat Zafar & Dr. A. A. Qureshi (2008). Effect of environmental temperature on feed intake, egg production and egg weight of commercial layer. Abstract published in 35th All Pakistan Science Conference. Genomics for Health & Prosperity. University of Karachi. Pakistan Society for Microbiology, Pakistan Association for the Advancement Association. December 20 – 23, 2008, Karachi, Pakistan.

16. Farhat Zafar, **Zulfiqar Ahmed** and S. Sadiqa Rizvi (2008). Use of Orange By-Products in Poultry Ration.
Abstract Published in 35th All Pakistan Science Conference. Genomics for Health & Prosperity. University of Karachi. Pakistan Society for Microbiology, Pakistan Association for the Advancement Association. December 20 – 23, 2008, Karachi, Pakistan.
17. Zafar F, Ghazal S and **Z. Ahmed** (2007). A comparative study to evaluate the effect of feeding plant protein based feed and animal protein based feed on few biochemical parameters of layer chicken.
Abstract published in International Nutrition Conference. February 23- 24, 2007. Held at University of Agriculture Faisalabad, Pakistan.
18. Zafar F, Sualeha Ghazal, Sumera Naz, Syeda Sadiqa Rizvi and **Zulfiqar Ahmed** (2005). A comparative study on effect of feeding plant protein based feed and animal protein based feed on few biochemical parameters of layer chicken.
Abstract published in 8th Biennial national conference of Pakistan Society of Biochemistry and Molecular Biology, Emerging Trends in Biochemistry and Molecular Biology. Department of Biochemistry, University of Karachi, March 7 – 9, 2005.

ARTICLES PUBLISHED IN NEWSPAPERS

1. **Temperature affects weight eggs**
News Paper: The Nation, Monday, January 26, 2009
2. **An article on Swine Influenza and its threats.**
News Paper: The Daily Jang. Sunday Magazine, July 12, 2009

OTHER PUBLICATIONS

1. Lab Manual on **Experiments in Gastrointestinal Physiology**
2. Lab Manual of **Cell Physiology**

TRAINING PROGRAMS ATTENDED

1. **1ST PROBE CONFERENCE, Biology: Down The Road 16 – 18 January, 2018**
Organized by Department of Physiology, University of Karachi.
2. Dr. A.Q. Khan Winter School on “**Modern Tools and Techniques in Health and Disease**”
December 25 – 27, 2015, organized by Dr. A. Q. Khan Institute of Biotechnology and Genetic Engineering (KIBGE), University of Karachi.
3. **STAFF DEVELOPMENT PROGRAM**
Sponsored by National Academy of Higher Education (NAHE) & Higher Education Commission (HEC), Islamabad
At Department of Genetics, University of Karachi
12th December, 2005 to 7th January, 2006

4. Training Program of Presiding Officer

Conducted by Support of National Election in Pakistan, UNDP & Election Commission of Pakistan on 18 December, 2007

ORGANIZING SECRETARY

- 1. One Day Seminar on STRESS MANAGEMENT: Islamic & Scientific Perspective**, on August 17, 2009, Organized by Pakistan Physiological Society in collaboration with Department of Physiology, University of Karachi & Dow University of Health Sciences.

SEMINARS / WORKSHOPS / CONFERENCES ORGANIZED

- 1. Annual Research Talk (ART) 2023. Physiology Bifurcations: Challenges and Outcomes, 5th September, 2023.**
- 2. 2ND PROBE CONFERENCE, Molecules to Mechanisms, 07 – 09 January, 2020**
Organized by Department of Physiology, University of Karachi.
- 3. 2ND ANNUAL RESEARCH TALK (ART) 2018**
(Physiology: Knowledge for life), September 5 – 6, 2018
Department of Physiology, University of Karachi
- 4. 1ST PROBE CONFERENCE, Biology: Down The Road 16 – 18 January, 2018**
Organized by Department of Physiology, University of Karachi.
- 5. ANNUAL RESEARCH TALK (ART) 2017**
(AESTHETICS IN PHYSIOLOGICAL RESEARCH), October 10 – 11, 2017
Department of Physiology, University of Karachi
- 6. Cancer; an ongoing life threat, 26th July, 2011, organized by Department of Physiology in collaboration with Pakistan Physiological Society.**
- 7. One Day Seminar, OBESITY: A LIFE STYLE DISEASE, 26th April, 2011, organized by Department of Physiology, University of Karachi.**
- 8. 2ND STAFF DEVELOPMENT PROGRAM FOR TEACHERS IN HIGHER EDUCATION, May 29 – June 24, 2006.** Organized by Human Resource Center, University of Karachi in collaboration with National Academy of Higher Education, Sponsored by Higher Education Commission, Pakistan.
- 9. Workshop on Experimental Physiology Part I, 5 – 6 May, 2006, Organized by Department of Physiology, University of Karachi, Higher Education Commission Pakistan and ADInstruments, Australia.**
- 10. Six Days Training Course in Physiology, 7 – 12 August, 2006, Organized by Department of Physiology, University of Karachi, Sponsored by Higher Education Commission, Pakistan**
- 11. One Day Seminar on EXAMINATION STANDARDS, August 6, 2005, Organized by Quality Enhancement Cell & Department of Physiology, University of Karachi.**

SEMINARS / WORKSHOPS / CONFERENCES ATTENDED

WORKSHOPS

1. **Pipette Clinic Workshop** at Karachi University (Department of Physiology), Karachi on 10th October, 2018, Organized by Eco Biosciences in collaboration with Eppendorf.
2. **3rd National Workshop on Classical Protein Chemistry**, December 19-20, 2016, organized by Dr. Panjwani Center for Molecular Medicine and Drug Research, (ICCBS), University of Karachi, Karachi, Pakistan
3. **Data Analysis Using SPSS**, conducted on Wednesday, 1st June, 2016.
4. The Graduate Inn, **“MICROSOFT EXCEL BASIC TO ADVANCE”** October 19 – 20, 2015, University of Karachi.
5. **Diversity of Vitamin D Functions**, at Ojha Campus Dow University of Health Sciences, Karachi, on Monday, February 22, 2010.
6. Pre-Symposium workshop/Seminar on **Experimental Physiology** on 23rd February, 2007 at Dow Medical College, Karachi.
7. **“Communication Skills for Researchers”** Jointly organized by M.A.H. Qadri Biological Research Center and Department of English, University of Karachi, June 26 – July 1, 2006
8. **Writing Scientific Papers**, held in Karachi on Friday 9th December, 2005 at Audio Visual Center, University of Karachi. Organized by Center of Molecular Genetics, University of Karachi in collaboration with University of Illinois, Chicago, USA.
9. **Computer Based Layer Feed Formulations & FFSBM Usage**, Conducted on Thursday, April 21, 2005, K&N’s House, Karachi
10. **Tariq Welfare Trust, Critical Care Physicians**, held on April 8, 2005 at Regent Plaza Hotel, Karachi.
11. **HEJRIC-TOKTEN WORKSHOP ON ANIMAL CELL CULTURE**, December 23rd 2002 to January 03rd 2003, jointly sponsored by the United Nation Development Program/National Talent Pool of Pakistan and Methodist-Research Institute, Clarian Health Partner, Inc. Indianapolis.

SEMINARS

1. **Motivation & Challenges in Research; A personal Experience**, organized by Pathophysiology & Psychophysiology Lab, Department of Physiology, University of Karachi, on 20th December, 2018.
2. **ANNUAL RESEARCH TALK (ART) 2017, (AESTHETICSS IN PHYSIOLOGICAL RESEARCH)**, October 10-11, 2017 at Department of Physiology, University of Karachi..

3. **One Day Seminar on Thalassemia: Precautions & Prevention**, October 5, 2011, Organized by Department of Physiology, University of Karachi.
4. **One Day Seminar on Cancer; an Ongoing life threat**, 26th July, 2011, Organized by Department of Physiology in collaboration with Pakistan Physiological Society.
5. **One Day Seminar on OBESITY: A LFIE STYLE DISEASE**, 26th April, 2011, Organized by Department of Physiology, University of Karachi.
6. **ONE DAY SEMINAR ON ALZHEIMER'S DISEASE**, on 6th April 2011, Organized by AERIC and Dr. Essa Laboratory & Diagnostic Center, Karachi
7. **STRESS MANAGEMENT: Islamic and Scientific Perspectives**, organized by Pakistan Physiological Society in collaboration with Department of Physiology, University of Karachi & Dow University of Health Sciences, August 17, 2009.
8. **PREVENTION OF OSTEOPOROSIS THROUGH PHYSICAL ACTIVITY**, 8th August, 2008, at Arts Auditorium, organized by Department of Health & Physical Education, University of Karachi.
9. **One Day Seminar on EXAMINATION STANDARDS**, held on 6th August 2005, Organized by Department of Physiology in co-ordination with Quality Enhancement Cell, University of Karachi.

CONFERENCES

1. **2ND PROBE Conference**, held on 07-09 January, 2020, Organized by Department of Physiology, University of Karachi.
2. **Karachi University Business Science Conference 1.0**, held on 24TH August 2019, Organized by Department of Physiology, University of Karachi.
3. **CONFERENCE SAAP & PPS 16 BIENNIAL CONFERENCE 2018**, held at the University of Lahore on 13-15 December 2018, Organized by University College of Medicine & Dentistry (UCMD).
4. **First International Conference on Life Sciences "Emerging Trends in Biological Sciences and Genomics"** December 28-30, 2015, jointly organized by M.A.H. Qadri Biological Research Center (BRC) & Dr. A.Q. Khan Institute of Biotechnology & Genetic Engineering (KIBGE), University of Karachi.
5. **12th PPS BIENNIAL CONFERENCE, Pakistan Physiological Society (PPS)**, held from 11th – 12th April, 2011 at Lahore, Pakistan.
6. **35th ALL PAKISTAN SCIENCE CONFERENCE**, December 20-23. 2008, held at International Center for Chemical and Biological Sciences / LEJ University of Karachi organized by University of Karachi – Pakistan Association for Advancement of Sciences (PAAS) and Pakistan Society for Microbiology.

7. **1st South Asian Conference of Physiological Societies & 11th Biennial Conference of Pakistan Physiological Society** at Shifa College of Medicine, Islamabad, Pakistan, November 10 – 12, 2008.
8. **International Nutrition Conference - 2007**, held in Faisalabad, Pakistan on February 23-24, 2007, organized by Nutritionist Association of Pakistan.
9. **Emerging Trends in Biochemistry and Molecular Biology**, Department of Biochemistry, University of Karachi, March 7-9, 2005.
10. **International Nutrition Conference-2004**, held in Lahore, Pakistan on December 1-2, 2004, organized by Nutritionist Association of Pakistan.

EDUCATIONAL BACKGROUND

DOCTORATE

Ph.D. Physiology from the Department of Physiology, University of Karachi, 2019. Under the supervision of Dr. Taseer Ahmed Khan, Associate Professor, Department of Physiology, University of Karachi

Entitled:

Studies on Effective Control Strategies against Salmonellosis through the use of Probiotics in Poultry

M.Phil.

M.Phi. Physiology from the Department of Physiology, University of Karachi, 2011. Under the supervision of Dr. Kalim ur Rehman Khan, Professor, Department of Physiology, University of Karachi

Entitled:

Effect of Egg Weight on Fertility and Hatchability I Layer and Broiler Breeders

MEMBERSHIP

1. Member of Pakistan Physiological Society
2. Member of Nutritionist Association of Pakistan
3. Member of Physiology Alumni Association

SYED MUDDASSAR HUSSAIN GILANI, PH.D: **ANIMAL NUTRITIONIST**

House # B-3 Residential Area
Karachi Institute of Biotechnology & Genetic Engineering (KIBGE),
University of Karachi, Karachi
Email: gilani1294@gmail.com
Mob: 00923218237926 ,03338237926



OBJECTIVES

- To participate my active role to alleviate hunger and food scarcity of the world by converting the traditional food raw material and by products into best, healthy and nutritious food through application of advanced knowledge of poultry nutrition.

ACADEMIC QUALIFICATIONS

- **Ph.D in Agriculture (Poultry Nutrition)**, 2019, Department of Agriculture and Agribusiness Management, University of Karachi, Karachi, Pakistan.
Ph.D Thesis: "Growth modulation in broiler chickens by Natural Growth Promoters (NGPs): Implicating nutrigenomic approach"
- **B. Sc. Hons. (Animal Husbandry)**, 2001, Faculty of Animal Husbandry, University of Agriculture Faisalabad, Pakistan.
- **F. Sc. (Pre-Medical)**, 1997, Board of Intermediate Education Karachi, Pakistan.
- **Matric (Biology)**, 1993, Board of Secondary Education Karachi, Pakistan.

PROFESSIONAL EXPERIENCE

2022- till now - Visiting Faculty Member

Department of Physiology, University of Karachi, Karachi

2019- till now - Visiting Faculty Member

Department of Agriculture & Agribusiness Management, University of Karachi, Karachi.

CEO, GILANI BIOSCIENCES Aug 2020 -till now

Country Manager, VAAPS International Jan 2019 to August, 2020

Job Responsibilities:

- Develop Animal Nutrition & Health Business in Pakistan by growing existing business as well as identifying and developing new business.
- Formulating sales strategy and develop sales forecast, budget and manpower plan
- Lead sales function for assigned territory
- Plan and implement market cost according to agreed targets. Structure resources, people and expense to achieve marketing and sales result according to budget agreement.
- Select, manage and develop distributors in Pakistan in order to grow poultry and livestock feed additives along with veterinary products business and to serve non- direct customers.
- Maintain and develop strong business relationships with key customers and establish long term customer relations with key strategic accounts and conduct value added business alliances in order to realize the overall veterinary and feed additives business objectives in Pakistan and to achieve budgeted sales.
- Implement the strategy for products to promote the company and product image in Pakistan in line with corporate / foreign principle companies' requirements and supports the long term value chain of foreign companies products.
- Assess trends and needs of Pakistani customers/market as they relate to product performance, service offering quality and implement new product promotion plan.
- Provide technical information and nutritional consultancy services to customers to improve customer relationship.

- Formulating poultry premix based on animal's requirements, raw materials availability and current prices using least cost formulation such as Brill software and feed soft.
- To provide the least cost feed formulation to farmers with technical incorporation of feed additive products to enhanced the productivity with maximum profit by using feed formulation programs.
- To manage and design Research & development trials protocols to evaluate product performance and efficiencies in local environment and technically discuss the results with foreign principles (technical expert of animal sciences) and key customers to enhanced the business of feed additives products in Pakistan .
- To select distributors, stockiest to maintain sales forecast and territory plan including the management of direct customers (Institutional sales) within the territory.
- To manage the indenting business opportunities of feed additives.
- To maintain and build effective relationships with key contacts to ensure sales growth and targets.
- Creating regular customer technical newsletters.
- To conduct market surveys and develop new marketing strategies to expand the business.
- Organizing and facilitating products technical seminars and workshops.
- Presenting the company at congress, trade shows and seminars.
- To conduct technical training of products to enhance selling skills of poultry nutritionist, veterinary doctors and sales staff.
- Assist to formulate the sales policies, procedures and practices according to the technical and practical aspects of products.
- To arrange visits of foreign principles with potential customers in poultry and dairy industry of Pakistan to explore the marketing opportunities regarding products.

New Sindh Feeds and Allied Products, Karachi

Sales & Technical Advisor September 2003 – June 2004

Job Responsibilities

- To provide technical advisory services to broilers, layers & breeder farmers about farm management, vaccination, feeding, watering, record keeping along with pre and post-mortem examination of birds for diagnosis of various diseases and necessary medication.

- Managing customer's complaints professionally to ensure customer satisfaction.

Hi-Chic Poultry Breeding Farms, Karachi

Sales & Technical Advisor (Hisex layer)

January 2002 – August 2003

Job Responsibilities

- To provide technical services for pre arrival and post arrival day old chicks to poultry farmers.
- To provide regular visits to and technical services to poultry farmers technical services to famers including vaccination, pre and postmortem of birds with necessary advice of medication, biosecurity, nutritional services etc.,
- To provide assistance to formulate economical, balanced and efficient layer rations to famers according to nutritional requirement of birds.

AWARDS/ ACHIEVEMENTS

- **Guest of Honor 202 “ Facing together challenges of Poultry Industry “** WPSA -South Zone, Pakistan Branch.
- **Honourable Speaker of Egg Day 2023,** Poultry Science Society, University of Karachi
- **Excellence Award 2016** for the best performance in the year 2016 as Regional Sales Manager, Feed Technology Division by Ghazi Brothers Pakistan **Excellence Award 2016** for the best performance in the year 2016 as Regional Sales Manager, Feed Technology Division by Ghazi Brothers Pakistan.
- **Excellence Award 2015** for the best performance in the year 2015 by Ghazi Brothers Pakistan.
- **Excellence Award 2013** for the best performance in the year 2013 by Ghazi Brothers Pakistan.
- **Annual Performance Award (Third Position)** for the year 2011 by Ghazi Brothers Pakistan.
- **Best Sales Manager (Medicine) Award 2009** by Poultry Farmer Award.

- **Excellence Award 2007** for the best performance in the year 2007 as Regional Sales Manager, Feed Technology Division by Ghazi Brothers Pakistan at P.C Bhurban Muree.
- **Appreciation certificate** from Pakistan Poultry Association Sindh Zone on organizing Shab-e-Tehseen at 22nd June 2007.
- **Excellence Award 2006** for the best performance in the year 2006 as Territory Manager, Feed Technology Division by Ghazi Brothers Pakistan at Serena Sawat . Certificate of Merit as Best Senior Technical Sales Officer by Ghazi Brothers Pakistan for the year 2004-2005 at Peshawar.

WORKSHOP/ CONGRESS ATTENDED

- **INTERNATIONAL WORKSHOP ON “USE OF GENOME EDITING & OTHER NEW BREEDING TECHNOLOGIES FOR GLOBAL FOOD SECURITY”** organized by NIBGE, COMSTECH and ICGEB at Comstech, Islamabad, Pakistan held on 8th to 10th April, 2019.
- **6TH INTERNATIONAL CONFERENCE ON SUSTAINABLE ENVIRONMENT AND AGRICULTURE (ICSEA 2018)** organized by Hong kong Chemical, Biological & Environmental Engineering Society (HKCBEES) held at San Diego, California ,USA on October 29-31, 2018.
- Technical training on **“OPTIMIZING FEED PERFORMANCE AND BUSINESS PROFITABILITY”** by ABVista UK , at J W Marriott Marquis Hotel, Dubai held on January 8 –10, 2018.
- **INTERNATIONAL CONFERENCE VIV ASIA 2017** at The Bangkok International Trade & Exhibition Centre (BITEC) in Bangkok from 15 -17 March 2017.
- **FIRST INTERNATIONAL CONFERENCE ON LIFE SCIENCES “EMERGING TRENDS IN BIOLOGICAL SCIENCES AND GENOMICS”** at Dr. A. Q. Khan Institute of Biotechnology& Genetic Engineering (KIBGE) university of Karachi held on December 27-29, 2015.
- **ASIAN CONGRESS ON BIOTECHNOLOGY** at Istana Hotel, Kuala Lumpur, Malaysia organized by Asian Federation of Biotechnology and Faculty of Biotechnology and Bio molecular Sciences, University of Putra Malaysia from November, 15-19, 2015.
- **INTERNATIONAL CONFERENCE VICTAM ASIA 2014** at The Bangkok International Trade & Exhibition Centre (BITEC) in Bangkok from 8 -10 April 2014.
- International training workshop on **“THE APPLICATION & IMPORTANCE OF PROTEASES ENZYMES IN POULTRY FEED”** by NOVUS, USA held at Bangkok from 6-8 December 2014.

- **INTERNATIONAL LIVESTOCK NUTRITION CONFERENCE** organized by Nutritionist Association of Pakistan at University of Veterinary and Animal Sciences Lahore from October 23-24, 2013.
- **INTERNATIONAL CONFERENCE VICTAM ASIA 2012** at The Bangkok International Trade & Exhibition Centre (BITEC) in Bangkok from 15 -17 February, 2012.
- **4th ICLS-KIBGE INTERNATIONAL CONFERENCE SCIENCE, TECHNOLOGY & ENGINEERING: INNOVATIVE, YET RESPONSIBLE** " at Dr. A. Q. Khan Institute of Biotechnology and Genetic Engineering (KIBGE), University of Karachi, Karachi held on 18 October, 2012.
- **ANNUAL SALES CONFERENCE** organized by Ghazi Brothers held at Hotel Grand, Peshawar from 3-5 July, 2005.
- **ANNUAL SALES AND TRAINING CONFERENCE** organized by Ghazi Brothers held at Hotel Margala, Islamabad From 11-15 August, 2004.
- **INTERNATIONAL NUTRITION CONFERENCE** held at Department of Animal Nutrition, University of Veterinary and Animal Sciences Lahore from 1-2 December, 2004.
- Workshop on "**HOW TO RAISE HEALTHY DISEASE FREE, FCR-EFFICIENT FLOCK**" organized by Department of Continued Veterinary Education and Extension (CVE) at Baqai College of Veterinary Sciences, Baqai Medical University, Karachi held at 21 September, 2004.

ORAL PRESENTATIONS/ ABSTRACT PROCEEDINGS

- Gilani, S.M.H., S. Zehra, F. Hassan, "Effect of Natural Growth Promoters as Alternatives to Antibiotic Growth Promoters (AGPs) on Lipids profile, Carcass Characteristics and Growth Performance of Broiler Chickens". on 6th International Conference on Sustainable Environment and Agriculture (ICSEA 2018) organized by Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBEEES) held at San Diego, California, USA on October 29-31, 2018.
- Rashid, Z., Mirani, Z. A., Zehra, S. M. H Gilani, Chishti, A. A., Azhar, A. "Enhanced modulation of gut microbial dynamics in broiler chickens triggered by natural growth promoters (NGPs) administered in conventional feed". organized by Asia-Pacific Association of Science Engineering & Technology (APASET) at Virtual University, Lahore from October 25-27, 2017

PUBLICATIONS:

- 2021 **Gilani, S. M. H, Rashid, Z., Galani, S., Ilyas, S., Sahar, S., Hassan, Z., Zehra, S., and Azhar, A. Growth performance, intestinal histomorphology, gut microflora and ghrelin gene expression analysis of broiler chickens by supplementing natural growth promoters: A nutrigenomics approach. *Saudi Journal of Biological Sciences*. <https://doi.org/10.1016/j.sjbs.2021.03.008>. (Impact Factor 4.2)**
- 2021 **Rashid, Z., Yousaf, M. Z., Gilani, S. M. H., Zehra, S., Ali, A., Azhar, A and Galani, S. 2021. Comparative analysis of chicken cecal microbial diversity and taxonomic composition in response to dietary variation using 16S rRNA amplicon sequencing. *Molecular Biology Reports*, 48:7203–7214. <https://doi.org/10.1007/s11033-021-06712-3>. (Impact Factor 2.4)**
- 2020 **Rashid, Z., Mirani, A. M., Zehra, S., Gilani, S. M. H, Ashraf, A., Azhar, A., Al-Ghanim, K., Al-Misne, F., Al-Mulahim, N., Mahboob, S. and Galani, S Enhanced modulation of gut microbial dynamics affecting body weight in birds, triggered by natural growth promoters administered in conventional feed. *Saudi Journal of Biological Sciences*, <https://doi.org/10.1016/j.sjbs.2020.06.027>. (Impact Factor 4.2)**
- 2020 **Rashid, Z., Gilani, S. M. H, Ashraf, A., Zehra, S., Azhar, A., Galani, S., Al-Ghanim, K., Al-Misne, F. and Mahboob, S., Benchmark Taxonomic Classification of Chicken Gut Bacteria based on 16S rRNA Gene Profiling in Correlation with Various Feeding Strategies. *Journal of King Saud University-Science* 32, 1034-104. <https://doi.org/10.1016/j.jksus.2019.09.013> (Impact Factor 3.81)**

- 2019 Rashid, Z., Mirani, Z. A., Zehra, Gilani, S. M. H, Chishti, A. A, Azhar, A. and Galani, S. **Dietary inclusion of phytogetic feed additives (PFA) as alternative to in-feed antibiotics modulating gut microbial dynamics in broiler chicken.** *Biologia (Pakistan)*. 65(II) Online, 1-9.
- 2018 Gilani, S.M.H., S. Zehra, F. Hassan, S. Galani and A. Ashraf. **Effect of natural growth promoters on immunity, and biochemical and haematological parameters of broiler chickens.** *Tropical Journal of Pharmaceutical Research*. 17(4): 627-633. <http://dx.doi.org/10.4314/tjpr.v17i4.9> (Impact Factor 0.57)

Genbank Depositions

- 2019 *Escherichia coli* strain KIBGE-AB3 16S ribosomal RNA gene, partial sequence. Rashid, Z., Mirani, Z.A., Zehra, S., Gilani, M.H., Chishti, A.A., Azhar, A., Galani, S. GenBank Accession # MK855427.
- 2019 *Escherichia coli* strain KIBGE-AB4 16S ribosomal RNA gene, partial sequence. Rashid, Z., Mirani, Z.A., Zehra, S., Gilani, M.H., Chishti, A.A., Azhar, A., Galani, S. GenBank Accession # MK855428.
- 2019 *Enterococcus faecalis* strain KIBGE-AB6 16S ribosomal RNA gene, partial sequence. Rashid, Z., Mirani, Z.A., Zehra, S., Gilani, M.H., Chishti, A.A., Azhar, A., Galani, S. GenBank Accession # MK855420.
- 2019 *Enterococcus faecalis* strain KIBGE-AB7 16S ribosomal RNA gene, partial sequence. Rashid, Z., Mirani, Z.A., Zehra, S., Gilani, M.H., Chishti, A.A., Azhar, A., Galani, S. GenBank Accession # MK855421.

Personal Skills and Competencies

- Operating different computer programs like MS-Office, Excel, Internet, Email etc.
- Proficient in English, Urdu, Punjabi
- Ability to communicate at all levels from feed mill to management.
- Self-motivated, creative and target oriented
- Willing to travelling
- Ability to work independently or in structured team

Personal Information:

Date Of Birth	:	21 April, 1978
Father's Name	:	Syed Mushtaq Hussain Gilani
N.I.C #	:	42201-9358636-9
Marital Status	:	Married
Nationality	:	Pakistani
Religion	:	Islam

ARIBAH NAZ

Address: C-31 KESC society near Safoora, Karachi
Contact No: 0331-2460255
Date of Birth 25-11-1989
Email Address: aribahnaz@hotmail.com

Career Objective:

To make best use of my capabilities, knowledge, skills and experience with broader responsibilities and to gain the professional growth as well to make a sound contribution to overall efficiency and operations of the organization.

Academic Qualification:

M.Phil. /Ph.D. Genetics

University Of Karachi

Thesis Title: Identification of luminescent bacterial strain and cloning of *lux* gene(s) into a cloning vector

CGP Obtained: 3.82.

M.Sc. Genetics (2011)

University Of Karachi

Subjects Studied: Human, Microbial, Molecular Genetics, Cellular Physiology & Biochemistry

Percentage Obtained: 80.2%

B.Sc. Botany (2009)

University Of Karachi

Subjects Studied: Botany, Physiology & Biochemistry

Percentage Obtained: 79.2%

HSC (2007)

Trinity Methodist Girls Higher Secondary School

Subjects Studied: Botany, Zoology, Chemistry & Physics

Percentage Obtained: 69.2%

SSC (2005)

Trinity Methodist Girls Higher Secondary School

Subjects Studied: Biology, Chemistry & Physics

Percentage Obtained: 73.17%

Teaching Experience:

Working as **Lecturer** at Department Of Genetics, University Of Karachi.

Taught Poultry breeding, Classical Genetics, Microbial genetics, Molecular genetics and various other subjects (July 2018- till Date).

Worked as **Teaching Assistant** at Department Of Genetics, University Of Karachi.

(January 2014- December2016).

Lab Experience

Two Months (June- July 2011) Internship in Lab of International Centre for Chemical and Biological Sciences (ICCBS), University of Karachi

Publications

Naz, Aribah, Uzma Badar, Afsheen Arif, Zaid Qureshi, Sondas Saeed, Erum Shoeb, Maqsood Ali Ansari, and Obaid Yusuf Khan. "Characterization of Bioluminescent Bacterial Strain Isolated from *Nemipterus japonicus* Fish of Arabian Sea." *Pakistan Journal of Zoology*", 52 (6): 2327-2331, 2020.

Naz, Aribah, Afsheen Arif, and Uzma Badar. "Effects OF Magnesium, Calcium and Sodium salts on growth and luminescence of *Vibrio harveyi*." *International Journal of Biology and Biotechnology*", 17 (1): 159-162, 2020.

Badar, Uzma, Erum Shoeb, Jameela Akhtar, Komal Daredia, Aribah Naz, Safia Bano, and Obaid Y. Khan. "PCR based gene Identification of Lux Operon in Luminescent *Vibrio Chagasii* isolated from Karachi Coast." *International Journal of Biology and Biotechnology*", 15 (1): 23-28, 2018.

Oral Presentation:

Naz, A., Arif, A., Chishti, A., Shoeb, E., Ansari, M. & Badar, U. Lux based system: A reporter for the assessment of food pathogens. Research and Enterprise on Food safety in developing world. December 5-8, 2016. CIIT, Islamabad Pakistan.

Naz, A., Ansari, F, Ansari, A., Arif, A., & Badar, U. Construction of Vector for Genotoxicity Measurements. Institute of Food Science and Technology. December 18-20, 2017. Bahauddin Zakariya University, Multan Pakistan

Poster Presentation:

Naz, A., Arif, A., Chishti, A., Shoeb, E., Ansari, M. & Badar, U. Construction of Dual Function Vector for Geno/Cytotoxicity Measurements. 14th Eurasia Conference on chemical sciences. December 15-18, 2016. HEJ, Karachi Pakistan.

Project Presentation:

Naz, A., Arif, A., Shoeb, E., Ansari, M. & Badar, U. Assessment of food pathogens by lux based system. 2nd All Pakistan DUHS-DICE Health innovation Exhibition on 23rd & 24th December, 2016 Expo Centre, Karachi Pakistan.

Sequence Submitted:

Naz, A., Badar, U., Arif, A., Shoeb, E. & Zaidi, N.N. *Vibrio harveyi* strain DGU300, 16S ribosomal RNA gene, partial sequence. Accession: KY653092.

Dr. MUHAMMAD NOMAN SYED

ASSOCIATE PROFESSOR (TTS)

Department of Biochemistry,

University of Karachi,

Karachi.

Email: noman.syed@uok.edu.pk

Research, Analysis and teaching career span over 26 years, currently working as Associate Professor of Biochemistry, at University of Karachi. The main research interest is in the field of protein chemistry with particular emphasis on enzyme technology. At present, research is focused on application of enzymes for green chemistry and in food biochemistry.

EDUCATION

2009	Doctor of Philosophy– Biochemistry University of Karachi, Karachi, Pakistan Thesis: Isolation, Purification & Characterization of Lipase from a Newly Isolated Strain of <i>Pseudomonas aeruginosa</i> BN-1
1997	Master of Sciences – Biochemistry University of Karachi, Karachi, Pakistan Thesis: Levels of C-Reactive Protein (CRP) & Immunoglobulin in Cerebrospinal fluid (CSF) during different Neurological Disorder
1994	Bachelor of Sciences University of Karachi, Karachi, Pakistan

PROFESSIONAL APPOINTMENTS

2022 to date	University of Karachi, Karachi, Pakistan <i>Associate Professor (TTS)</i> Teaching undergraduate and postgraduate students. Postgraduate Research Supervision
2013- 2022	University of Karachi, Karachi, Pakistan <i>Assistant Professor (TTS)</i> Teaching undergraduate and postgraduate students. Postgraduate Research Supervision
2006-2012	Pakistan Council for Scientific and Industrial Research (PCSIR) Labs Complex Karachi, Pakistan <i>Senior Scientific Officer</i> Research and Development & Quality Assurance of In Vitro Diagnostic Kits
2000-2006	Pakistan Council for Scientific and Industrial Research (PCSIR) Labs Complex Karachi, Pakistan <i>Scientific Officer</i> Research and Development & Quality Assurance of Testing & Analysis under ISO-17025

PUBLICATIONS

Publications can be tracked at :

Google scholar: Dr. Noman Syed Biochemistry;

Scopus Author ID: 14064151500

ORICD <https://orcid.org/0000-0002-7697-8625>

Web of Science Researcher ID AAO-4428-2021

1.	2022	Ejaz, U., Saleem, F., Rashid, R., Hassan, KA., Syed, M.N., Sohail, M. Unveiling the genomic potential of a novel thermostable glycoside hydrolases producing <i>Neobacillus sedimentimangrovi</i> UE25 Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology 10.1007/s10482-023-01835-y
2.		Shumaila, N., Nadir M., , Ahmed Siddqui PJ., Amir A., Syed M. N., Rasheed M., Lipophilic Constituents of the Blubber from Blue Whale, <i>Balaenoptera musculus</i> , washed Ashore at Pakistan Coast Journal of the Chemical Society of Pakistan 44(5), 393 -407
3.	2021	Umer, A., Syed, M. N., Tarar, O. M., Mushtaq, S., Jalbani, N., Saleem, N. & Ahmad, N. Biochemical evaluation with reference to nutritional aspects of edible species of crabs collected from the coastal waters of Pakistan Journal of Food Composition and Analysis ,100, 103877.
4.		Ansari, I., Ejaz, U., Abideen, Z., Gulzar, S., Syed, M.N., Liu, J., Li, W., Fu, P. & Sohail, M. Wild halophytic <i>Phragmites karka</i> biomass saccharification by bacterial enzyme cocktail. Front. Microbiol. 12:714940. doi: 10.3389/fmicb.2021.714940
5.	2020	Zehra, M., Syed, M. N., & Sohail, M. Banana peels: a promising substrate for the coproduction of pectinase and xylanase from <i>Aspergillus fumigatus</i> MS16. Polish journal of microbiology , 69(1), 19.
6.		Ilyas, R. A. B. I. A., Ahmed, A., Sohail, M., & Syed, M. N. Glucoamylase from a thermophilic strain of <i>Bacillus licheniformis</i> RT-17: production and characterization. Pak. J. Bot. 52(1), 329-333
7.	2019	Budhwani, A. A. A., Maqbool, A., Hussain, T., & Syed, M. N. Production of biodiesel by enzymatic transesterification of non-edible <i>Salvadora persica</i> (Pilu) oil and crude coconut oil in a solvent-free system. Bioresources and Bioprocessing , 6(1), 1-9.
8.		Sana, A., & Syed, M. N. Isolation of a novel halotolerant lipase producing strain of <i>Pseudomonas stutzeri</i> . International Journal of Biology and Biotechnology , 16(1), 37-43.
9.	2019	Madiha, S., & Muhammad, N. S. Optimization of fermentation conditions for the bio synthesis of cellulase through newly isolated strain of <i>Bacillus</i> . International Journal of Biology and Biotechnology , 16(3), 601-605.
10.		Ahmad, S., Riaz, A., Abbasi, H., & Syed, M. N. Modification of process parameters for enhanced lipase induction from <i>Bacillus</i> SR1 RADS J. Biol. Res. Appl. Sci. 10(1):14-17

11.	2014	Nawaz, B., Ali, A., Syed, M. N., & Khan, A. B. Screening for toxigenic Escherichia coli in stool samples of diarrhoeal patients by polymerase chain reaction. Pakistan journal of pharmaceutical sciences, 27.
12.	2013	Bano, S., Qader, S. A. U., Aman, A., Syed, M. N., & Durrani, K. High production of cellulose degrading endo-1, 4- β -D-glucanase using bagasse as a substrate from Bacillus subtilis KIBGE HAS. Carbohydrate polymers, 91(1), 300-304.
13.		Veesar, I. A., Memon, S., & Syed, M. N. Synthetic p-tetrasulphonatocalix [4] arene as novel excipient for lipase-complex. Biochemical engineering journal, 79, 71-76.
14.	2012	Syed, M. N., Mehmood, S., Bashir, A., & Ashraf, F. Physical immobilization of 60 kDa Chaperonin linked lipase from Pseudomonas aeruginosa BN-1. Pak. J. Biochem. Mol. Biol, 45(3), 126-128.
15.	2011	Bano, S., Qader, S. A. U., Aman, A., Syed, M. N., & Azhar, A. Purification and characterization of novel α -amylase from Bacillus subtilis KIBGE HAS. AAPS Pharmscitech, 12(1), 255-261.
16.	2010	Syed, M. N., Iqbal, S., Bano, S., Khan, A. B., Ali-ul-Qader, S., & Azhar, A. Purification and characterization of 60 kD lipase linked with chaperonin from Pseudomonas aeruginosa BN-1. African Journal of Biotechnology, 9(45), 7724-7732.
17.		Laghari, A. H., Memon, S., Nelofar, A., Khan, K. M., Yasmin, A., Syed, M. N., & Aman, A. A new flavanone with urease-inhibition activity isolated from roots of manna plant camelthorn (Alhagi maurorum). Journal of Molecular Structure, 965(1-3), 65-67.
18.	2008	Qader, S. A. U., Aman, A., Bano, S., Syed, N., & Azhar, A. Role of calcium ions and temperature on dextransucrase production. Indian Journal of Biotechnology, 7, 404-406.
19.	2007	SA, U. Q., Aman, A., Syed, N., Bano, S., & Azhar, A. Characterization of dextransucrase immobilized on calcium alginate beads from Leuconostoc mesenteroides PCSIR-4. Italian journal of biochemistry, 56(2), 158-162.
20.	2006	Qader, S. A. U., Bano, S., Aman, A., Syed, N., & Azhar, A. Enhanced production and extracellular activity of commercially important amylolytic enzyme by a newly isolated strain of Bacillus sp. AS-1. Turk. J. Biochem, 31(3), 135-40.
21.	2005	Shaukat, S., Sohail, T., & Syed, M. N. Biodisposition Kinetics of Spiramycin in Human Volunteers. Journal-Chemical Society of Pakistan, 27(3), 292.
22.	2004	Syed, M. N., Khan, A. B. K., Ali-ul-Qader, S., Iqbal, S., Shaukat, S., & Azhar, A. Screening of bacterial isolates from drinking water of Karachi [Pakistan] for lipase production. Pakistan Journal of Biochemistry & Molecular biology (2004) 37 (4)156-161

PROTEIN DATA BASE SUBMISSIONS

Sr.#	Year	Primary Accession Number	Details
1.	2007	P85080	GTF1_LEUME
2.	2009	P30718	Lipase from <i>Pseudomonas aeruginosa</i> BN-1

GENE BANK DEPOSITIONS

Records can be viewed at

<https://www.ncbi.nlm.nih.gov/sites/myncbi/dr.noman.syed.bio.chemistry.1/collections/60973573/public/>

Whole Genome Shotgun Sequencing Project

Sr. #	Year	Accession No.	Details
1.	2021	JAJODE000000000	<i>Neobacillus sedimentimangrovi</i> strain UE25, whole genome shotgun sequencing project

Bacterial 16s Ribosomal RNA Sequences

Sr. #	Year	Accession No.	Details
1.	2021	OL672239.1	<i>Candida metapsilosis</i> strain SH06_AHK internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene, complete sequence; and internal transcribed spacer 2, partial sequence
2.		OL423442.1	<i>Bacillus</i> sp. (in: Bacteria) strain Scrambling Y5_AHK 16S ribosomal RNA gene, partial sequence
3.		MZ361697.1	<i>Bacillus subtilis</i> strain 3SAr 16S ribosomal RNA gene, partial sequence 460 bp linear DNA Nucleotide [sequence] GI: 2050235597,
4.		MZ361698.1	<i>Bacillus subtilis</i> strain 3SAf 16S ribosomal RNA gene, partial sequence 471 bp linear DNA Nucleotide [sequence] GI: 2050235598,
5.		MZ254910.1	<i>Bacillus subtilis</i> strain MD1 16S ribosomal RNA gene, partial sequence 452 bp linear DNA Nucleotide [sequence] GI: 2043335614,
6.	2018	MH639063.1	<i>Bacillus tequilensis</i> strain SN-1 16S ribosomal RNA gene, partial sequence 740 bp linear DNA Nucleotide [sequence] GI: 1438517206,
7.		MH639064.1	<i>Bacillus subtilis</i> strain SN-2 16S ribosomal RNA gene, partial sequence 624 bp linear DNA Nucleotide [sequence] GI: 1438517207,
8.		MH639065.1	<i>Pseudomonas stutzeri</i> strain SN-3 16S ribosomal RNA gene, partial sequence 598 bp linear DNA Nucleotide [sequence] GI: 1438517208,
9.	2008	EU819145.1	<i>Bacillus subtilis</i> strain KIBGE-HAS 16S ribosomal RNA gene, partial sequence 372 bp linear DNA GI: 194205388

POST GRADUATE RESEARCH SUPERVISION

PhD

Sr.#	Thesis Title	Degree Awarded in
1	PRODUCTION & PURIFICATION OF TRIACYL GLYCEROL HYDROLASE FROM BACILLUS SPECIES	2020
2	PRODUCTION & PURIFICATION OF TRIACYL GLYCEROL HYDROLASE FROM BACILLUS SPECIES	2023

M.Phil. /M.S.

S. No	Thesis title	Degree Awarded in
1.	ISOLATION AND OPTIMIZE PRODUCTION OF α -AMYLASE FROM <i>ASPERGILLUS FLAVUS</i>	2018
2.	ISOLATION & PRODUCTION OF PECTINASE FROM <i>ASPERGILLUS NIGER</i>	2019
3.	ISOLATION, PRODUCTION AND PARTIAL PURIFICATION OF CELLULASE FROM <i>BACILLUS SP.</i>	2019
4.	PRODUCTION OF BIODIESEL BY ENZYMATIC TRANSESTERIFICATION OF NON-EDIBLE SALVADORA PERSICA (PILU) OIL AND CRUDE COCONUT OIL IN A SOLVENT-FREE SYSTEM	2019
5.	ISOLATION, PRODUCTION, PARTIAL PURIFICATION AND CHARACTERIZATION OF GLUCOAMYLASE FROM NEWLY ISOLATED STRAIN OF <i>BACILLUS SPECIES</i>	2019
6.	PURIFICATION AND CHARACTERIZATION OF LIPASE FROM <i>ZYGOSACCHAROMYCES SPECIES</i>	2020
7.	BIOCHEMICAL EVALUATION WITH REFERENCE TO NUTRITIONAL ASPECT OF EDIBLE SPECIES OF CRABS IN PAKISTAN	2021
8.	PURIFICATION AND CHARACTERIZATION OF THERMOPHILIC CELLULASE ISOLATED FROM <i>BACILLUS LICHENIFORMIS RT-17</i>	2021
9.	ENCAPSULATION OF LIPASE FROM <i>ZYGOSACCHAROMYCES</i> IN SOL-GEL MATRIX	2021

RESEARCH GRANTS

Year	Agency	Amount (In million Rs.)
2014	Dean, Faculty of Science University of Karachi	0.1
2016	Dean, Faculty of Science University of Karachi	0.1

INVITED LECTURES/ CONFERENCES

2019	Guest Speaker, Hands on Workshop on Polymerase Chain Reaction Centralized Science Laboratory University of Karachi March 2019
2018	Guest Speaker ZABCON , Department of Biosciences SZABIST Karachi November 2018
2017	Speaker 2 nd Invention to Innovation Summit 2017 University of Karachi December 2017

Paper Presented

- **M. N Syed**, Khan A.B., Iqbal S., Qader S.A., Rizvi H.A., and Azhar A.,
Production and Properties of Lipase from *Pseudomonas aeruginosa* BN-1”
8th PSBMB International Conference, “Trends in Biochemistry & Molecular Biology” March 7-9 2005
- **M. N Syed**, Nadeem M., Qader S.A., Siddiqui K., & Rizvi H.A.
“Preparation of In house reagents for determination of Calcium ions in human fluid and comparison with other commercial diagnostic kits”
7th PSBMB International Conference, “Trends in Biochemistry & Molecular Biology” April 2-5 2003
- **M. N Syed**, Khan. N., Khan. S., Nisar S., Khan M. A., Rizvi J., Shireen K., & Azhar A.,
“Increased risk to the health of human populations on long term exposure to heavy metals”
7th PSBMB International Conference, “Trends in Biochemistry & Molecular Biology” April 2-5 2003
- **M. N Syed**, Khan. N., Khan. S., Nisar S., Khan M. A., Rizvi J., Shireen K., & Azhar A.,
“Effect of long term heavy metal exposure on human population living at costal area of Karachi”
Marine Environment 2002: “Food Health & Habitat” British Council Library, Karachi Pakistan 2002.
- **M. N Syed**, Khan. N., Khan. S., Mustahq F., Khan M. A., Rizvi J., Shireen K., & Azhar A.,
“Alteration in Haemtological and Coagulation Profile by Long term heavy metal exposure”
6th National Conference, PSBMB, Khairpur, Pakistan 2001
- **M. N Syed**, Khan. N., Khan. S., Nisar S., Khan M. A., Rizvi J., Shireen K., & Azhar A.,
“Serum testosterone level in relation to heavy metal concentration in exposed men”
6th National Conference, PSBMB, Khairpur, Pakistan 2001
- **M. N Syed**, Khanum. N., Khan. S., Ilyas S., Khan M. A., Shireen K., & Azhar A.,
“Exposure to heavy metals and alteration in cardiac enzymes, antioxidant levels, and kidney function”
2nd International Science Conference Lahore 2000

REFERENCES

- **Dr. Abid Azhar**
Meritorious Professor & Director General
The Karachi Institute of Biotechnology
& Genetic Engineering (KIBGE)
Email: abid.azhar@kibge.edu.pk

- **Dr. Syed Kashif Ali**
Professor & Dean
Faculty of Lifesciences,
Shaheed Zuffiqar Ali Bhutto Institute of Science & Technology
(SZABIST), Karachi
Email: kashif.ali@szabist.edu.pk

KAMRAN NAZIR

Regional Service & Sales Manager
Olympia Chick Pvt Limited
Karachi
Email: meerkaam27@gmail.com

CAREER OBJECTIVE:

Result Oriented, Sales and Technical Service Manager with a proven track record of exceeding targets. Seeking a Challenging Position in a dynamic institution where I can leverage my strategic thinking, leadership skills and extensive sales and technical experience for the betterment of the institution. My commitment is to built a high performance team which is goal driven with backup of strong technical background. I strive to deliver exceptional results by spreading my gained experience in this field to my juniors.

ACADEMIC QUALIFICATIONS

Qualification	Year	Institution
M.Sc. (Poultry Physiology)	Dec 1998	Department of Physiology, University of Karachi
B.Sc. (Hons) Major: Physiology	Dec 1997	Department of Physiology, University of Karachi
H.S.C. (Pre-Medical)	1994	Government Science College, Malir Cantt, Karachi
S.S.C.	1992	P.I.A. Model School, Karachi

PROFESSIONAL EXPERIENCE IN ACADEMIA

Visiting Faculty Morning Program (BS Poultry Science)

Department of Physiology, University of Karachi from January 2023 till to date
Courses Taught: Incubation Principles and Hatchery Management, Poultry Housing and Equipment

Visiting Faculty Evening Program (Poultry Physiology)

Department of Physiology, University of Karachi from January 2021 till to date
Courses Taught: Poultry Housing and Management, Poultry Pathology, Incubation and Hatchery Practices, Poultry Extension

PROFESSIONAL EXPERIENCE IN INDUSTRY

MARKETING MANAGER

Olympia Chick Pvt Limited
Karachi

August 2021 till to date

Responsibilities & Achievements:

- I direct all operations related to Sales, Hatchery and Productions.

- I am also responsible for Planning and implementing best practices and procedures that to create a profitable business.
- Managing Day to Day operations of the office including Hatchery and Sales and keeping close liaison at our Breeding farm level, including Scheduling and overseeing employees.
- Provide leadership coaching and development to all personal in Sales and Production, and Hatchery.
- To communicate effectively with Employees, Producers, Suppliers and non-company's Personal to ensure better performance.
- To make close liaison with Quality customers, to rectify their complaints, and future Business gains.
- To provide technical Assistance to our Farmers for making our product to perform better.
- To plan annual forecast of our Product and our Business.
- To Plan for future Strategies and Expansion.

SALES AND SERVICE MANAGER

Jan 2003 – July 2021

Waleed Poultry Breeding Farms,
Karachi, Pakistan

Responsibilities & Achievements:

- Oversee all function of the Breeding Farm and delegate tasks to over 100 workers including supervisors, Laborers, Electrical and Technicians of Generators etc. to ensure daily operations to run smoothly.
- To coordinate with Farm Supervisors to gather daily/weekly tasks and reports regarding Vaccination, Feed, Lighting Programme Production, Disease, Mortality, Medication, Biosecurity etc.
- Managing and supervising Disinfection programme at all levels.
- Supervising and conducting Post Mortem Examinations of Mortality /dead birds, supported by Laboratory Examinations and later recommendation for Medication.
- Managing Body weight, feed consumption and Egg Weight.
- Design Schedule Vaccination Programme and Lighting Programmes for Birds.
- Supervise Grading and Disinfection of Grading Eggs and dispatching it safely to Hatchery for incubation purpose.

TECHNICAL SALES OFFICER

Feb 1999 – Dec 2002

Waleed Poultry Breeding Farms,
Karachi, Pakistan

Responsibilities & Achievements:

- My assignment at this post were
- To make all necessary arrangements before the arrival of Broilers Breeder Day Old Chicks for Rearing purpose, including Brooding, Feeders and Drinkers Provision, Preventive Medications for the Flock.
- To maintain Daily Feed intake Record and Morbidity and Mortality Record,
- To maintain and Scheduling all Vaccination Tasks.
- Weighing of Flock on weekly basis and checking their Uniformity.
- Checking Health Status of Flock by daily monitoring the Sign and Symptoms.
- To manage Feed storage, Egg room, general store.

- Fumigation of Eggs before delivery to Hatchery.
 - Checking daily Mortality and performing Post Mortem, and coordinating with the Laboratory staff for providing samples, their collection, and examination and performing Test to isolate the Micro Organism with further checking their sensitivity for proper medications to gain desirable results.
-

PROFESSIONAL DEVELOPMENT TRAININGS

- **Basic Tools in Molecular Biology**
Department of Physiology
University of Karachi
- **Avian Disease Prevention Training Course**
Cooperative Avian Health Program
Garden Grove, California, USA

PROFESSIONAL AFFILIATIONS

- Pakistan Poultry Association.
- Technical Advisor, Pakistan Poultry Magazine

RESEARCH ARTICLES:

- Amit Khan, Zulfiqar Ahmad, Kamran Nazir, Muhammad Noman Khan, Farhat Iqbal and Taseer Ahmed Khan (2011). A study on perception evaluation of Pakistani population against Influenza A (H1N1). International Journal of Biology and Biotechnology. 8 (3): 427432.
- Farhat Zafar, Kamran Nazir, Anwar Ali, Taseer Ahmed Khan (2004). A study on the calcium and phosphorous deficiency in broiler flocks of Karachi region. Intl. Chem. Pharm. Med. J. 2: 97-98.
- T. A. Khan, A. Hasan, K. Nazir. (2004) Blood analysis of broiler chicks affected with Hydropericardium syndrome (HPS) in Karachi. International Journal of Biology and Biotechnology. 1 (4): 635-639.

References:

Reference will be furnished upon request.

Curriculum Vitae

MUHAMMAD SOHAIL s/o MUHAMMAD ISMAIL

Ph. D (University of Karachi, Pakistan) & Postdoc (University College London, UK)
*Associate Professor, Department of Microbiology, University of Karachi, Karachi-75270,
Pakistan. Email: msohail@uok.edu.pk Cell: 00923002334972

Current Job Responsibilities and Description

- Teaching undergraduate and graduate students, research supervision of graduate and undergraduate students. Acquisition of research funding

Job Description include:

- Planning teaching various courses (every semester)
- Conducting classes and labs
- Designing new labs for undergrad and grad students
- Formulating various themes pertaining to students' evaluation
- Assessment of students' assignment and grading of exam copies
- Meeting students individually and in groups when they need guidance
- Mentoring research students
- Writing grant proposals
- Research dissemination through seminars, conferences and publications

Teaching Experience

- ☑ Serving as Associate Professor in Microbiology, University of Karachi from July 03, 2016 till date.
- ☑ Served as Assistant Professor in the Department of Microbiology, University of Karachi since May 05, 2010 to July 02, 2016.
- ☑ Served as a Lecturer in the department of Microbiology, University of Karachi from Sept 14, 2006 to May 04, 2010.
- ☑ Served as a Lecturer in the department of Microbiology, Federal Urdu University for Arts, Science and Technology, from Dec. 23, 2003 to Sept 13, 2006.
- ☑ Served as visiting faculty member in the Department of Environmental Sciences, FUUAST.
- ☑ Served as visiting faculty member in the evening program of the Department of Pharmaceutical Sciences and Management, FUUAST.
- ☑ As a lecturer in Arab Foundation College, from Sept 2002 to July 2003

ADMINISTRATIVE EXPERIENCE

1. Registrar, University of Karachi, from Feb 01 to May 16, 2019.
2. Director, Centralized Science Laboratory, University of Karachi, since July 14, 2017 till Feb 15, 2019

3. Incharge, Students Financial Aid Office, University of Karachi, since July 14, 2016 till March 15, 2019
4. Member Committee for the Quality Enhancement Cell from 2017 to 2019.

Research Experience

- ☑ Visiting Research Scientist at the State Key Laboratories of Marine Resource Utilization in South China Sea, University of Hainan, Haikou, China in the year 2019.
- ☑ Worked as Postdoctoral research associate (**PDRA**) in the Department of Biochemical Engineering, **University College London**, London, United Kingdom from Dec 2013 to Sept 2014. The project was mainly focused on directed evolution of an enzyme, transketolase, widely applied in synthetic biology. The project was funded by an Erasmus Mundus (EMEA) action-2 Program.
- ☑ Completed Ph D on the topic “Characterization of Cellulases from locally isolated fungi and their kinetic Studies” under the supervision of Prof. Dr. Shakeel Ahmed Khan, Department of Microbiology, University of Karachi
- ☑ Have experience of working with isolation, screening and characterization of enzyme producing microorganisms. Can develop and work with enzyme assays. Have experience in the development of mutants for the over production of enzymes. Can carry out many protein chemistry techniques independently, for instance, SDS PAGE, Zymography, Ion exchange and Size exclusion chromatography etc.
- ☑ M.Sc. Thesis on the topic “Amylolytic Activity of Soil Microorganisms” under the supervision of Prof. Dr. Aqeel Ahmad, Department of Microbiology, University of Karachi

Research Projects

1. As **Principal Investigator**: Source Tracking of XDR Salmonella typhi in Karachi and development of a diagnostic method for its detection using molecular approaches. A grant of Rs 1.6 million has been approved by Health Research Institute (HRI)-NIH, Islamabad. 2022-2024.
2. As **Co-Principal Investigator**: Process development for scale-up production of a therapeutic L-asparaginase via indigenous microbial sources for medicinal and industrial requirements. A grant of more than Rs 4.1 million has been approved by the Higher Education Commission, Pakistan to the PI Dr Khwaja Ali Hassan (Biochemistry, UoK). 2022-2024.
3. As **Co-Principal Investigator**: Development and Demonstration of a “Model Cropping System” for Coastal Barren Land to Address the Food Security in Pakistan. A grant of more than Rs 6.1 million has been approved by the Higher Education Commission, Pakistan to the PI Dr Zaheer Ahmed (ISHU, UoK) 2022-2025.
4. As **Co-Principal Investigator**: Development of first Commercial scale citric acid production plant in Pakistan by submerged fermentation of *Aspergillus niger* using cane molasses as raw material; A milestone yet to be achieved. **Technology**

Development Fund. A grant of 14 million Rs has been approved by the Higher Education Commission, Pakistan. 2018-2020.

5. As **Principal investigator**: Utilization of ionic liquid pretreated sugarcane bagasse for the production of valuable chemicals, thermostable cellulase and compost. Funded by Higher Education Commission (HEC), Pakistan. 2017-2020.
6. As **Principal investigator**: Utilization of apple peels for the co-production of cellulase, xylanase and pectinase by *Aspergillus fumigatus*. Funded by Dean Faculty of Science, University of Karachi, 2012-2013.
7. As **Principal investigator**: Studies on indigenous mycoflora of yeast for the production of some industrially important enzymes. Funded by Third World Academy of Sciences (TWAS).
8. As **Principal investigator**: Mutagenesis of *Aspergillus fumigatus* MS16 for improved production of xylanases. Funded by Dean Faculty of Science, University of Karachi, in the year 2010-11.
9. As **Principal investigator**: Studies on native xylanolytic fungi. Funded by Dean Faculty of Science, University of Karachi, in the year 2008-09
10. As **Principal investigator**: Studies on native xylanolytic fungi. Funded by Dean Faculty of Science, University of Karachi, in the year 2007-08
11. As **Co-principal Investigator**: Study of generation of electricity by the fermentation of domestic and waste-water. Funded by HEC in the year 2007.

Patent

A patent on citric acid producing mold has been submitted to Pakistan Patent Office with the number PK/P/2022/000083

Research Productivity Award

Awarded Research Productivity Award (RPA) by Pakistan Council for Science and Technology (PCST) in the year 2012. The name has been included in the directory of productive scientists of Pakistan.

Research Supervision Degree Awarded

S. No.	Name of Scholar	Topic of study	Degree Awarded	Year
1.	Tooba Khan	Exploring enzymatic potential of endophytic microorganisms from <i>Arthrocnemum macrostachyum</i>	Ph D	2024
2.	Uroosa Ejaz	Characterization of cellulase from <i>Neobacillus sedimentimangrovi</i> UE25 and its biotechnological applications	Ph D	2023

3.	Rozina Rashid	Production of xylanase from thermophilic <i>Bacillus</i> strains using new approaches	Ph D	2023
4.	Qandeel Laraib	Biodegradation of azo-dyes in textile effluent by indigenous fungi	Ph D	2021
5.	Asia Ahmed	Production and regulation of pectinases from indigenously isolated yeast strains	Ph D	2019
6.	Maria Shariq	Studies on cellulases and xylanases of indigenous yeast strains.	Ph D	2018
7.	FakhrUdin	Genetic diversity of metallo- β -lactamases from <i>Pseudomonas</i> and <i>Acinetobacter</i>	Ph D	2018
8.	Ammad Rehman	Studies on lipases from bacteria isolated from rhizospheric region and endophytes of <i>Arthrocnemum macrostachyum</i>	M Phil	2022
9.	Nida Rehman	Molecular and biological characterization of virulent genes of avian <i>Mycoplasma</i> in commercial poultry	M. Phil	2022
10.	Maria Muhammad Ashraf	Studies on lipase production from an endophytic bacterial strain isolated from <i>Arthrocnemum macrostachyum</i>	M Phil	2022
11.	Mustansir Abbas	Biological pretreatment of sugarcane bagasse for the production of cellulase	M Phil	2022
12.	Usama Hafeez	Combined treatment of laccase and cellulase for the saccharification of sugarcane bagasse	M Phil	2022
13.	Immad Ansari	Evaluation of the potential of bacterial enzyme cocktail for the saccharification of halophytic biomass	M Phil	2021
14.	Rida Tariq	In silico comparison between thermostable and thermolabile microbial endoglucanase	M Phil	2021
15.	Faizan Qadir	Evaluation of yeast mono- and co-culture immobilized on corncob for continuous pectinase production by using orange peels as a substrate	M Phil	2019
16.	Waleed Yousuf	Antimicrobial Activity of Plants Found In Horn Of Africa Against Methicillin Resistant <i>Staphylococcus aureus</i>	M Phil	2018
17.	Masooma Hassan	Studies on cellulases from indigenous thermotolerant/thermophilic aerobic bacteria, their characterization and biotechnological applications	M Phil	2018
18.	Uroosa Ejaz	Exploring potential of thermophilic bacteria to utilize sugarcane bagasse for the production of cellulase	M Phil	2018
19.	Mahwish Zehra	Utilization of Banana Peels for the production of plant cell wall degrading enzymes from indigenous fungal strains	M Phil	2017
20.	Tahniyat Shakil	Characterization of lipases from indigenous yeast strains	M Phil	2017
21.	>18 M Sc/ BS Theses More than 10 scholars working to pursue research degrees			

Citation Matrices

Total Impact Factor: >210
Total Publications: 94
Scopus ID: 35345624800
Over 1320 Citations on Scopus
Scopus *h* index: 20
ORCID: 0000-0002-7208-9441
Web of Science ID: AAI-2539-2019
Over 1900 Citations on Google Scholar
Google Scholar *h* index: 23

Publications

2024 (IF this year >12)

1. Waqif H, Munir N, Farrukh MA, Hasnain M, **Sohail M**, Abideen Z. 2024. Algal macromolecular synthesis of nanoparticles for their application against citrus canker for food security. *International Journal of Biological Macromolecules*. 263: <https://doi.org/10.1016/j.ijbiomac.2024.130259> **IF = 8.0**
2. Abbas M, Ejaz U, **Sohail M**, Alanazi AK. 2024. Application of *Trametes pubescens* for dye removal and biological pretreatment of sugarcane bagasse. *Biofuels, Bioproducts and Biorefining*. DOI: 10.1002/bbb.2591 (IF = 4)

2023 (IF this year >68)

1. Ejaz U, Taj A, **Sohail M**, Alanazi AK, Abo Dief HM. 2023. Towards a zero waste approach: Utilization of sugarcane bagasse for dye removal and multienzymes production. *Journal of Basic Microbiology*. Doi: 10.1002/jobm.202300529 **IF = 3.1**
2. Razaq L, Uddin F, Shahzad A, Abbasi SM, **Sohail M**, Yousif NE, Abo-Dief HM, El-Bahy ZM. 2023. In vitro activity of new β -lactamase inhibitor combinations against *bla*_{NDM}, *bla*_{KPC} and ESBL-producing Enterobacteriales uropathogens. *Antibiotics*. 12:1481. <https://doi.org/10.3390/antibiotics12101481> **IF = 4.8**
3. Hanif A, **Sohail M**. 2023. Agro-industrial waste exploitation for pectin-degrading enzyme production by microbial fermentation. 1st ed. *Microbial bioprocessing of Agri-food wastes*. CRC Press. (BOOK CHAPTER)
4. Laraib Q, Shafique M, Verisani MA, Gul K, Ejaz U, Muhammad H, Naz SA, Rangel DE, Alder-Rangel A, Yasmeen K, Jabeen N, Liu J, Wang L, Fu P, **Sohail M**. 2023. Enhanced degradation of Acid Orange 52 using a polyextremophilic Ascomycete in stirred tank bioreactor. *Water, Air & Soil Pollution*. 234:509 doi: <https://doi.org/10.1007/s11270-023-06508-0> **IF = 2.9**
5. Hassan M, Ejaz U, Rashid R, Moin SF, Gulzar S, **Sohail M**, Hassan KA, Alswat AS, El-Bahy ZM. 2023. Utilization of wild *Cressa cretica* biomass for pectinase production from a halo-thermotolerant bacterium. *Biotechnology Journal*. 10.1002/biot.202200477 **IF = 4.6**
6. Rehman N, Ejaz U, Siraj A, Liaquat S, **Sohail M**, Khan TA, Moin SF, Ahmad A. 2023. Colloidal gold based immunochromatographic detection of *Mycoplasma* *synoviae* infection and its prevalence in avian species of Karachi, Pakistan. *Research in Veterinary Science*. <https://doi.org/10.1016/j.rvsc.2023.06.010> **IF=2.55**

7. Hanif A, Ejaz U, Ansari I, **Sohail M**, Samma MK, Siddiqi M, Suleman F, Karim M. 2023. Potential application of *Suaeda fruticosa* and *Cressa cretica* biomass as substrate for pectinase production by *Geotrichum candidum*. *Arabian Journal of Science and Engineering*. 49:59-66 <https://doi.org/10.1007/s13369-023-08000-7> **IF=2.8**
8. Khan T, **Sohail M**, Ali ST. *Arthrocnemum macrostachyum* biomass: A novel substrate for multienzyme preparation by endophytic *Bacillus* species. *Biomass Conversion and Biorefinery*. <https://doi.org/10.1007/s13399-023-04407-2> **IF=4.05**
9. Ali SA, Saeed SMG, **Sohail M**, Elkhadragey MF, Yehia HM, Giuffre AM. 2023. Functionalization of pregelatinized urad bean fermented by *Saccharomyces cerevisiae* MK-157 as a fat replacer and its impact on physico-chemical, micromorphology, nutritional and sensory characteristics of biscuits. *Arabian Journal of Chemistry*. 16(9): <https://doi.org/10.1016/j.arabjc.2023.105029> **IF=6.2**
10. Ejaz U, Saleem F, Rashid R, Hassan KA, Syed MN, Sohail M. 2023. Unveiling the genomic potential of a novel thermostable glycoside hydrolases producing *Neobacillus sedimentimangrovi* UE25. *Antonie van Leeuwenhoek*. <https://doi.org/10.1007/s10482-023-01835-y> **IF=2.15**
11. Alorabi M, Ejaz U, Khoso BK, Uddin F, Mahmoud SF, **Sohail M**, Youssef M. 2023. Detection of genes encoding microbial surface component recognizing adhesive matrix molecules in methicillin resistant *Staphylococcus aureus* isolated from pyoderma patients. *Genes*. 14(4): 783 <https://doi.org/10.3390/genes14040783> **IF=4.14**
12. Khan Z, Shafique M, Jabeen N, Naz SA, Ejaz U, **Sohail M**. Protease from *Bacillus subtilis* ZMS-2: Evaluation of production dynamics through Response Surface methodology and application in leather tannery. *Journal of King Saud University-Science*. <https://doi.org/10.1016/j.jksus.2023.102643> **IF = 3.82**
13. Ejaz U, Rashid R, Ahmed S, Narejo KK, Qasim A, **Sohail M**, Ali ST, Althakafy JT, Alanazi AK, Abo-Dief HM, Moin SF. 2023. Synthesis of methylcellulose- polyvinyl alcohol composite, biopolymer film and thermostable enzymes from sugarcane bagasse. *International Journal of Biological Macromolecules*. 235: <https://doi.org/10.1016/j.ijbiomac.2023.123903> **IF = 8.02**
14. Abbas M, Ejaz U, Shafique M, Naz SA, **Sohail M**. 2023. Biological pretreatment of sugarcane bagasse for the production of fungal laccase and bacterial cellulase. *Journal of Basic Microbiology*. <https://doi.org/10.1002/jobm.202200684> **IF = 2.65**
15. Hafeez U, **Sohail M**, Ali ST. 2023. Single pot enzymatic treatment of sugarcane bagasse using laccase and cellulase for the production of value-added products. *SugarTech*. Doi 10.1007/s12355-023-01241-8 **IF = 1.8**
16. Alzahrani OM, **Sohail M**, Mahmoud SF, Alswat AS, El-Halmouch Y. 2023. Preparation of a pectinase enriched multienzyme under solid state fermentation of sugarcane bagasse. *Fermentation*. 9:141 <https://doi.org/10.3390/fermentation9020141> **IF = 5.12**
17. Aftab M, Ejaz U, Pashameah RA, Fatima A, Syed J, Ansari I, **Sohail M**, AlSubhi SA, Alzahrani E, El-Bahy ZA. 2023. Utilization of corncob as an immobilization matrix for a xylanolytic yeast strain. *Polymers*. 15:683 <https://doi.org/10.3390/polym15030683> **IF = 4.96**
18. Hanif A, Ejaz U, Hasan KA, Karim M, Suleman F, Siddiq M, Moin SF, Abideen Z, **Sohail M**. 2023. Two-way strategy for enhanced pectinase production: random mutagenesis and utilization of a halophytic biomass. *Biocatalysis and Agricultural Biotechnology*. 47: <https://doi.org/10.1016/j.bcab.2023.102619> **IF = 4.0**
19. Ejaz U, Moin SF, **Sohail M**, Mersal GAM, Ibrahim MM, El-Bahy SM. 2023. Characterization of a novel end product tolerant and thermostable cellulase from *Neobacillus sedimentimangrovi* UE25. *Enzyme and Microbial Technology*. 162: doi <https://doi.org/10.1016/j.enzmictec.2022.110133> **IF = 3.7**

2022 (IF this year = 32.2)

1. Alzahrani OM, Uddin F, Mahmoud SF, Alswat AS, **Sohail M**, Youssef M. 2022. Resistance to some new drugs and prevalence of ESBL and MBL producing Enterobacteriaceae uropathogens isolated from diabetic patients. *Life*. 12:2125. **IF = 3.2**
2. Ali SA, Saeed SMG, Ejaz U, Baloch MN, **Sohail M**. 2022. A novel approach to improve the nutritional value of black gram (*Vigna mungo* L.) by the combined effect of pre-gelatinization and fermentation by *Lactobacillus* sp. E14 and *Saccharomyces cerevisiae* MK;157: Impact on morphological, thermal and chemical structural properties. *LWT-Food Science and Technology*. 172: 114216 <https://doi.org/10.1016/j.lwt.2022.114216> **IF = 6.05**
3. Khan T, Alzahrani OM, Sohail M, Hassan KA, Gulzar S, Rehman AU, Mahmood SF, Alswat AS, Abdel Gawad SA. 2022. Enzyme Profiling and Identification of Endophytic and Rhizospheric Bacteria isolated from *Arthrocnemum macrostachyum*. *Microorganisms*. 10: 2112 doi: 10.3390/microorganisms10112112 **IF=4.92**
4. Munir N, Hanif M, Abideen Z, **Sohail M**, El-Keblawy AA, Radicetti E, Mancinelli R, Haider G. 2022. Deciphering Plant Microbiome Interactions Under Abiotic Stresses. *Agronomy*. 12(9):2069. Doi: <https://doi.org/10.3390/agronomy12092069> **IF = 3.94**
5. Barzkar N, Babich O, Das R, Sukhikh S, Jahromi ST, **Sohail M**. 2022. Marine Bacterial Dextranases: Fundamentals and Applications. *Molecules*. 27(17):5533. <https://doi.org/10.3390/molecules27175533> **IF = 4.97**
6. **Sohail M**, Barzkar N, Michaud P, Jahromi ST, Babich O, Sukhikh S, Das R, Nahavandi R. 2022. Cellulolytic and xylanolytic enzymes from yeasts: Properties and industrial applications. *Molecules*. 27(12):3783. <https://doi.org/10.3390/molecules27123783> **IF = 4.41**
7. Barzkar N, Sheng R, **Sohail M**, Jahromi ST, Babich O, Sukhikh S, Nahavandi R. 2022. Alginate lyases from marine bacteria: An enzyme ocean of opportunity. *Molecules*. 27(11):3375 doi: 10.3390/molecules27113375 **IF = 4.41**
8. Ejaz U, **Sohail M**, El-Bahy ZM, Salim MA, Alzahrani AY. 2022. Utilization of hydrolysate from saccharified sugarcane bagasse for phosphatases production. *Biomass Conversion and Biorefinery*. doi: 10.1007/s13399-022-02828-z **IF = 4.98**
9. Book Chapter Ejaz U, **Sohail M**. 2022. Bioaugmentation for lignin removal from the paper industry. *In: Bioaugmentation techniques and application in remediation*. (Eds) Inamuddin, Adetunji CO, Ahmad MI, Altalhi T. pp 17-27. CRC Press. doi: <http://dx.doi.org/10.1201/9781003187622-2>
10. Uddin F, **Sohail M**, Shaikh QH, Hussain TM, Roulston K, McHugh TD. Verona integron-encoded metallo-Beta-lactamase (VIM) and Vietnam extended-spectrum Beta-lactamase (VEB) producing pseudomonas balearica from a clinical specimen. *J Pak Med Assoc* 72(4) 761-763. **IF=0.781**

2021 (IF this year = 30.85) 52

1. Uddin F, Imam SH, Khan S, Khan TA, Ahmed Z, Sohail M, Elnaggar AY, Fallatah AM, El-Bahy ZM. 2021. NDM production as dominant feature in Carbapenem-resistant Enterobacteriaceae isolates from a tertiary care hospital. *Antibiotics*. 11(1): 48 doi: 10.3390/antibiotics11010048 **IF= 4.6**
2. Ejaz U, Shehzad Y, Hassan M, **Sohail M**. 2021. Statistical optimization of saccharification of carbohydrate content of alkali pretreated sugarcane bagasse by enzyme cocktail produced by *Bacillus vallismortis* MH 1 and *Bacillus aestuarii* UE25. *Carbohydrate Polymer Technologies and Applications*. <https://doi.org/10.1016/j.carpta.2021.100174>

3. Ejaz U, Wasim AA, Khan MN, Alzahrani AM, Mahmoud SE, El-Bahy ZM, **Sohail M**. 2021. Use of ionic liquid and fermented sugarcane bagasse as an adsorbent for congo red removal. *Polymers*. 13(22):3943 doi: <https://doi.org/10.3390/polym13223943> **IF = 4.3**
4. Ansari I, Ejaz U, Abideen Z, Gulzar S, Syed MN, Liu J, Li W, Fu P, **Sohail M**. 2021. Wild halophytic *Phragmites karka* biomass saccharification by bacterial enzyme cocktail. *Frontiers in Microbiology*. doi: 10.3389/fmicb.2021.714940 **IF = 5.6**
5. **Book Chapter**: Lignin: A renewable chemical feedstock. *In: Handbook of smart materials, technologies, and devices*. Pp 1-15. Hussain CM & Di Sia P (Eds). Springer Nature Switzerland https://doi.org/10.1007/978-3-030-58675-1_55-1
6. Zafar H, Rehman I, Ejaz U, **Sohail M**. 2021. Production of multienzyme by *Bacillus aestuarii* UE25 using ionic liquid pretreated sugarcane bagasse. *Journal of Basic Microbiology*. **IF = 2.18** <https://doi.org/10.1002/jobm.202100323>
7. Ejaz U, Ghanemi A, **Sohail M**. 2021. Cellulases: From Bioactivity to a variety of industrial applications. *Biomimetics*. 6(3):44. doi:10.3390/biomimetics6030044
8. Barzkar N, **Sohail M**, Jahromi ST, Nahavandi R, Khodadadi M (2021) Marine microbial L glutaminase: From pharmaceutical to food industry. *Applied Microbiology and Biotechnology*. 105: 4453-4466 Doi: 10.1007/s00253-021-11356-1 **IF = 3.53**
9. Uddin F, **Sohail M**, Shaikh QH, Ahmed S, Khan S, Roulston K, McHugh TD (2021) PCR and Microarray analysis of AmpC and ESBLs producing *Pseudomonas aeruginosa* isolates from intensive care units. *Gene Reports*. 23: <https://doi.org/10.1016/j.genrep.2021.101178>
10. **Book Chapter**: Biomass to Xylose *In: Sustainable bioconversion of waste to value added products*. Pp 247-265. (eds) Inamuddin. Springer Germany. Doi: 10.1007/978-3-030-61837-7_15
11. Saira Yahya, Muhammad Sohail, Shakeel Ahmed Khan (2021) Characterization, thermal stabilization and de-sizing potential of amylase from *A. tubingensis* SY 1. *The Journal of The Textile Institute*. 113:6, 993-1000 <https://doi.org/10.1080/00405000.2021.1914393> **IF = 1.2**
12. **Book Chapter**: Sugarcane Bagasse: A promising substrate for solid state fermentation. *In: Solid State Synthetic Methods; Green Sustainable Process for Chemical and Environmental Engineering and Science* (eds) Inamuddin. Elsevier. Doi: 10.1016/B978-0-12-819720-2.00001-1
13. Rashid R, **Sohail, M** (2021) Xylanolytic *Bacillus* species for Xylooligosaccharides production: A critical review. *Bioresources and Bioprocessing*. 8(1): 1-14 <https://doi.org/10.1186/s40643-021-00369-3> **IF = 4.57**
14. Barzkar N, **Sohail M**, Jahromi ST, Gozari M, Poormozaffar S, Nahavandi R, Hafezieh M (2021) Marine bacterial esterases: Emerging biocatalysts for industrial applications. *Applied Biochemistry and Biotechnology*. 193(4): 1187-1214. Doi 10.1007/s12010-020-03483-8 **IF = 2.27**
15. Ansari M, Zafar U, Ejaz U, **Sohail M**, Pirzada A, Aman A (2021) Comparison of composting of chemically treated and fermented sugarcane bagasse for zero-waste biorefinery. *Journal of Materials cycles and Waste Management*. <https://doi.org/10.1007/s10163-021-01176-w> **IF = 1.9**
16. Yahya S, Kakar FM, **Sohail M**, Khan SA (2021) Amylase production and growth pattern of two indigenously isolated *Aspergilli* under submerged fermentation: Influence of Physico-chemical parameters. *Pakistan Journal of Botany*. 53(3): 1147-1155 doi: 10.30848/PJB2021-3(31) **IF = 0.7**

2020 (IF this year = 24.65)

1. Rashid R, Ejaz U, Ali FI, Hashmi IA, Bari I, Liu J, Wang L, Fu P, **Sohail M** (2020) Combined pretreatment of sugarcane bagasse using alkali and ionic liquid to increase hemicellulose content and xylanase production. *BMC Biotechnology*. 20(64) Doi: 10.1186/s12896-020-00657-4 **IF = 2.31**

2. Ejaz U, Hanif H, **Sohail M.** (2020) Two layered strategy for cost effective production of pectinase: immobilization of yeast and utilization of crude substrate. *Heliyon*. 6(11) Doi: 10.1016/j.heliyon.2020.e05456
3. Ejaz U, Shoaib M, Firdous IA, Hashmi IA, **Sohail M.** (2020) Cellulose extraction from methyltrioctylammonium chloride pretreated sugarcane bagasse and its application. *International Journal of Biological Macromolecules*. 165: 11-17 <https://doi.org/10.1016/j.ijbiomac.2020.09.151> **IF = 5.16**
4. **Book Chapter:** Ejaz U and **Sohail M.** 2020. Ionic liquids: Green solvents for biomass pretreatment *In: Inamuddin and Asiri A (eds). Nanotechnology-based industrial application of ionic liquids. Nanotechnology in the Life Sciences. Springer.* https://doi.org/10.1007/978-3-030-44995-7_2
5. Ejaz U, **Sohail M.** Supporting role of lignin in immobilization of yeast on sugarcane bagasse for continuous pectinase production *Journal of the Science of Food and Agriculture*. 101(4): <https://doi.org/10.1002/jsfa.10764> **IF = 2.8**
6. Hassan M, **Sohail M.** (2020) Characterization of cellulases from thermophilic bacilli and their application for the saccharification of sugarcane bagasse. *Pakistan Journal of Botany*. 52(5): 1785-1791 DOI: [http://dx.doi.org/10.30848/PJB2020-5\(39\)](http://dx.doi.org/10.30848/PJB2020-5(39)) **IF = 0.7**
7. Tariq M, Ejaz U, **Sohail M.** (2020) Evaluation of factors affecting saccharification of sugarcane bagasse using cellulase preparation from a thermophilic strain of *Brevibacillus* sp. *Current Microbiology*. 77:2422-2429 <https://doi.org/10.1007/s00284-020-02059-3> **IF = 1.5**
8. Barzkar N, **Sohail M,** Aldhumri SA. (2020) Marine cellulolytic enzymes and their potential applications. *Applied Microbiology and Biotechnology* 104: 6873-6892 <https://doi.org/10.1007/s00253-020-10692-y> **IF = 3.6**
9. Ahmed R, Khoso BK, Uddin F, Rehman N, Hafiz S, **Sohail M.** (2020) A cross sectional study to observe the diversity of fungal species in Onychomycosis isolated from a tertiary care hospital in Karachi. *Journal of the Pakistan Medical Association*. Doi: 10.47391/JPMA.390 **IF = 0.5**
10. Laraib Q, Shafique M, Jabeen N, Naz SA, Nawaz HR, Solangi B, Zubair A, **Sohail M.** (2020) *Luffa cylindrica* immobilized *Aspergillus terreus* QMS-1: an efficient and cost effective strategy for the removal of congo red using stirred tank reactor. *Polish Journal of Microbiology* 69(2):193-203 doi: 10.33073/pjm-2020-022 **IF = 0.7**
11. Ejaz U, Shoaib M, Firdous IA, Hashmi IA, **Sohail M.** (2020) Utilization of methyltrioctylammonium chloride as new ionic liquid in pretreatment of sugarcane bagasse for production of cellulase by novel thermophilic bacteria. *Journal of Biotechnology*. 317:34-38 Doi: 10.1016/j.jbiotec.2020.04.013 **IF = 3.16**
12. Qadir F, Ejaz U, **Sohail M.** (2020) Co-culturing corncob-immobilized yeasts on orange peels for the pectinase production. *Biotechnology Letters*. 42(9):1743-1753 Doi: 10.1007/s10529-020-02897-y **IF = 2.15**
13. Shakil T, Ahmed A, **Sohail M.** (2020) Production of lipases from *Zygosaccharomyces marakii* TS16. *Pakistan Journal of Botany*. 52(3): 1039-1044 DOI: 10.30848/PJB2020-3(20) **IF = 0.69**
14. Shariq, M, **Sohail, M.** (2020) Production of cellulase and xylanase from *Candida tropicalis* (MK-118) on purified and crude substrates. *Pakistan Journal of Botany*. 52(1): 323-328 Doi: 10.30848/PJB2020-1(14). **IF = 0.690**
15. Ilyas, R., Ahmed, A., **Sohail, M.,** Syed, M.N. (2020). Glucoamylase from a thermophilic strain of *Bacillus licheniformis* RT-17: Production and Characterization. *Pakistan Journal of Botany*. 52(1): 329-333 Doi: 10.30848/PJB2020-1(34) **IF = 0.69**

2019 (IF this year = 11.09)

1. Shariq, M. and **Sohail, M.** (2019). Citrus limetta peels: a promising substrate for the production of multienzyme preparation from a yeast consortium. *Bioresources and Bioprocessing*. 6:43 doi:10.1186/s40643-019-0278-0
2. Ejaz, U, Muhammad, S, Ali, F, Hashmi, I, **Sohail, M.** (2019) Methyltrioctylammonium chloride mediated removal of lignin from sugarcane bagasse for the most stable cellulase production. *International Journal of Biological Macromolecules* 140:1064-1072 doi: 10.1016/j.ijbiomac.2019.08.206 **IF = 4.7**
3. Ahmed, A, Khan MN, Ahmad A, Khan SA, **Sohail M.** (2019) Optimization of pectinase production from *Geotrichum candidum* AA15 using response surface methodology. *Pakistan Journal of Botany*. 51(2): 743-750. **IF = 0.690**

4. Ahmed A, Ejaz U, **Sohail M.** (2019) Pectinase production from immobilized and free cells of *Geotrichum candidum* AA15 in galacturonic acid and sugars containing medium. Journal of King Saud University-Science 32(1): 952-954 doi: 10.1016/j.jksus.2019.07.003 **IF = 2.85**
5. Ahmed A, **Sohail M.** (2019) Characterization of pectinase from *Geotrichum candidum* AA15 and its potential application in orange juice clarification. Journal of King Saud University-Science 32(1): 955-961 doi: 10.1016/j.jksus.2019.07.002 **IF = 2.85**

2018 (IF this year = 8.28)

1. Uddin F, McHugh TD, Roulston K, Platt G, Khan TA, **Sohail M.** (2018) Detection of Carbapenemases, AmpC and ESBL genes in *Acinetobacter* isolates from ICUs by DNA microarray. Journal of Microbiological Methods. 155:19-23 **IF = 1.7**
2. Qaidr F, Shariq M, Ahmed A, **Sohail M.** (2018). Evaluation of a yeast co-culture for the production of cellulase and xylanase under solid state fermentation of sugarcane bagasse using multivariate approach. Industrial Crops and Products. 123: 407-415. **IF = 3.8**
3. Fakhur U, Roulsten K, McHugh T, **Sohail M.** (2018). Bacteremia in a human caused by an XDR strain of *Pseudomonas fulva*. Journal of Infection in Developing Countries. 12(7):597-599. doi:10.3855/jidc.10326. **IF = 1.4**
4. Ejaz U, Ahmed A, **Sohail M.** (2018) Statistical optimization of immobilization of yeast cells on corncob for pectinase production. Biocatalysis and Agricultural Biotechnology. 14:450-456
5. Shariq M. **Sohail M.** (2018). Application of *Candida tropicalis* MK-160 for the application of xylanase and ethanol. Journal of King Saud University-Science. 31(4): 1189-1194 Doi 10.1016/j.jksus.2018.04.009
6. Shariq M, Muhammad F, Ahmed A, Khan SA, Moin SF, **Sohail M.** (2018). Production and Characterization of Endoglucanase from an Indigenous Yeast Strain. Pak J Bot. 50(6):2413-2421. **IF = 0.690**
7. Tariq R, Ansari I, Qadir F, Ahmed A, Shariq M, Zafar U, Ahmad A, Khan SA, **Sohail M.** (2018) Optimization of Endoglucanase production from thermophilic strain of *Bacillus licheniformis* RT-17 and its application for saccharification of sugarcane bagasse. Pak J Bot. 50(2):807-816. **IF = 0.690**

2017 (IF this year = 1.306)

1. Kumari D, Abideen Z, **Sohail M,** Jahangeer S, Gul B, Khan MA, Khan SA.(2017) Plant cell wall hydrolyzing enzymes from indigenous isolated fungi grown on conventional and novel natural substrates. Pak J Bot. 47: 745-750 **IF = 0.690**
2. Indhar F, Durrani A, Bux A, **Sohail M.** (2017) Carbapenemases among acinetobacter species isolated from NICU of a tertiary care hospital in Karach. Journal of the Pakistan Medical Association. 67(10): 1547-1551 **IF = 0.616**

2016 (IF this year = 1.65)

1. **Sohail M,** Ahmad A, Khan SA.(2016) Production of cellulase from *Aspergillus terreus* MS105 on crude and commercially purified substrates. 3Biotech. 6:103-110 **IF = 0.992.**
2. Yahya S, Jahangeer S, Shaukat S, **Sohail M,** Khan SA. (2016) Production optimization by using Plackett Burman Design and Partial Characterization of Amylase from *Aspergillus tubingensis* SY 1. Pak J Bot 48:2557-2561 **IF = 0.658**

2015 (IF this year = 2.465)

1. Naz SA, Jabeen N, **Sohail M,** Rasool SA. (2015) Biophysicochemical characterization of Pyocin SA189 produced by *Pseudomonas aeruginosa* SA189. Brazilian Journal of Microbiology. 46:1147-1154. **IF = 0.594**
2. Naz SA, Jabeen N, **Sohail M,** Rasool SA. (2015) Production and purification of Pyocin from a soil associated *Pseudomonas aeruginosa* strain SA188. Pakistan Journal of Agricultural Sciences. 52: 873-

879.IF = 1.049

3. Naseeb S, **Sohail M**, Ahmad A, Khan SA. (2015) Production of xylanase and cellulase by *Aspergillus fumigatus* MS16 using crude lignocellulosic substrates. Pakistan Journal of Botany. 47: 779-784.IF = **0.822**

2014 (IF this year = 2.249)

1. Rehman S, Aslam H, Ahmad A, Khan SA, **Sohail M**. (2014) Production of plant CWDE by *Aspergillus niger* and *Aspergillus terreus* under SSF of banana peels. Brazilian Journal of Microbiology. 45: 1485-1492IF = **0.594**
2. Hashim SA, **Sohail M**. (2014) Amylases from Yeasts: an update. Trends in Life Sciences. 3: 30-37.
3. **Sohail M**, Ahmad A, Khan SA. (2014) Comparative studies on production of three strains of *Aspergillus niger*. Pakistan Journal of Botany. 46: 1911-1914.IF = **1.207**
4. Jalis H, Ahmad A, Khan SA, Sohail M. (2014) Utilization of apple peels for the production of plant cell-wall degrading enzymes by *Aspergillus fumigatus* MS16. The Journal of Animal and Plant Sciences. 24(2): 664-667.IF = **0.448**

2013 (IF this year = 0.345)

1. Khalil S, **Sohail M**. (2013). Indigenously isolated phosphate solubilizing bacteria and their application as biofertilizer. Trends in Life Sciences. 2: 10-16
2. **Sohail M**, Fahimuddin, Ahmad A, Khan SA. (2013). Kinetics, improved activity and thermostability of endoglucanase and β -glucosidase from a mutant-derivative of *Aspergillus niger*. Journal of the chemical society of Pakistan. Vol 35: 1543-1548IF = **0.345**

2011 (IF this year = 1.89)

1. **Sohail M**, Ahmad A, Khan SA. (2011) Production of cellulases from *Alternaria* sp. MS28 and their partial characterization. Pak J Botany 43: 3001-3006.IF = **0.947**
2. Alam SI, Kamran M, **Sohail M**, Ahmad A, Khan SA. (2011) Partial characterization of bacteriocin like inhibitory substance from *Bacillus subtilis* BS15, a local soil isolate. Pak J Botany 43: 2195-2199.IF = **0.947**

2010 (IF this year = 0.194)

1. Khan AM, Ali MM, Naz S, **Sohail M**. (2010) Generation of bioenergy by the aerobic fermentation of domestic wastewater. J. Chem. Soc. Pak. 32:209-214IF = **0.194**

2009 (IF this year = 2.52)

1. **Sohail M**, Ahmad A, Siddiqi R, Khan SA. (2009) Cellulase Production from *Aspergillus niger* MS82: effect of temperature and pH. New Biotechnology 25: 437-441IF = **2.0**

****The Paper remained one of the Top-5 most cited articles published in the journal during the period 2009-2012.**

2. **Sohail M**, Naseeb S, Sherwani SK, Aftab S, Sultana S, Shehzad S, Ahmad A, Khan SA. (2009) Distribution of hydrolytic enzymes among native fungi: *Aspergillus* is the predominant genus of hydrolase producer. Pak J Botany 41: 2567-2589IF = **0.520**

2005

1. Jahangeer S, Khan N, Jahangeer S, **Sohail M**, Shehzad S, Ahmad A, Khan SA. (2005) Screening and characterization of fungal cellulases isolated from the native environmental source. Pakistan Journal of Botany. 37(3): 739-748.
2. **Sohail M**, Shehzad S, Ahmad A, Khan SA. (2005) A survey of amylolytic bacteria and fungi from native environmental samples. Pakistan Journal of Botany. 37(1): 155-161.

Journal Editor

Serving as Member editorial board of the Journal: Genes, Fermentation, Frontiers in Fuels and Environment and Plant Systems.

Journal Referee

Over 300 verified reviews of more than 40 journals available on Web of Science
Web of Science ResearcherID: AAI-2539-2019

Few journals:

1. Journal of Biological Macromolecules
2. Scientific Reports
3. Journal of Infections in Developing Countries
4. Biocatalysis and Agricultural Biotechnology
5. Journal of Environmental Science and Research
6. Journal of Food Biotechnology
7. Letter in Applied Microbiology
8. Journal of Basic Microbiology
9. Journal of Applied Microbiology

Collaboration

Have collaboration with:

1. Prof Pengcheng Fu, State Key Laboratories for Marine Resource Utilization, Hainan University, China
2. Dr Naiemeh Enayatzamir, Shahid Chamran University of Ahvaz
3. Prof McHugh Timothy, University College London, United Kingdom
4. Noora Barzakar, University of Homozgan, Iran
5. Dr Maryam Shafique, Department of Microbiology, Federal Urdu University of Arts, Science and Technology, Karachi

Conference Papers

1. Anti-Methicillin Resistant *Staphylococcus aureus* activity of extracts of some African Plants. Presented in 2nd International Conference on Plant Science, held at the University of Swat, KPK, Pakistan. September 3-5, 2018.
2. Conversion of Lignocellulosic material into value added products by indigenous yeasts enzymes. 3rd International Conference on Environmental Horizon; Nurture Nature: Serve to Conserve!, 9-11 January 2015 .
3. Biodegradation of textile dye congo red by *Aspergillus terreus* under different conditions. 3rd International Conference on Environmental Horizon; Nurture Nature: Serve to Conserve!, 9-11 January 2015 .
4. Kinetics, improved activity and thermostability of endoglucanase and β -glucosidase from a mutant-derivative of *Aspergillus niger* Nov 7-8 2012, FUUAST, Karachi.
5. Mutagenesis of *Aspergillus niger* MS82 for improved productivity of cellulases using agricultural residues. International Conference on Agriculture. July 11-14, 2011. Faculty of Agriculture, Rawalkot, University of Azad Jammu and Kashmir.
6. Xylanases and cellulases from *Aspergillus fumigatus* MS16. Second National Symposium on Microbiology. March 18-22, 2010. Organized by Sind University, Jamshoro and Higher Education Commission Pakistan.
7. Temperature and pH effects on growth and cellulase production kinetics of *Aspergillus niger* MS82 and its mutant strain MS301. Delivered in 6th International Biennial Conference on Microbiology. 18-22 March 2007 in Islamabad Pakistan.
8. Production of *Aspergillus niger* cellulases by lignocellulosic waste fermentation. Delivered in 4th

- International symposium on Genetic engineering and Biotechnology. Held on 4 – 8 Dec 2005 at Karachi by Center for Molecular Genetics, University of Karachi.
9. Studies on Microbial Utilization of Starch. Delivered in First National Symposium held on April 19 – 20 2005, at Sind University, Jamshoro in collaboration with HEC Islamabad.
 10. Studies on Microbial Degradation of Phenol. Delivered in KU- PSM Seminar on “Impact of environmental pollution on Health Economy and natural resource management” held on April 04- 05, 2005 at Karachi University, Organized by PSM and Ministry of Environment, Government of Pakistan.
 11. Screening of locally isolated bacteria and fungi for amyolytic potential. Delivered in Fifth International Biennial Conference of Pakistan Society for Microbiology. Held on Jan 10 – 15 2005, at Karachi, in collaboration of HEC, Islamabad

Poster Presentations

1. Cultivation at higher temperature induces the production of cellulase-free xylanases in cellulolytic fungus *Aspergillus fumigatus* MS16. Nov 7-8, 2012, First National Symposium on Microbiology, FUUAST, Karach, Pakistan.
2. Screening of indigenous yeast strains for the production of plant cell wall degrading enzymes. Nov 7-8, 2012, First National Symposium on Microbiology, FUUAST, Karach, Pakistan.
3. Production of plant cell wall degrading enzymes by co-culture of *Aspergillus* strains through banana peels. Nov 7-8, 2012, First National Symposium on Microbiology, FUUAST, Karach, Pakistan.
4. Multi-enzyme production by *Aspergillus* strains under SSF of banana peels. Nov 7-8, 2012, First National Symposium on Microbiology, FUUAST, Karach, Pakistan.
5. Screening and partial characterization of extracellular fungal pectinases. 6th international biennial conference on microbiology. 18-22 March 2007. Islamabad, Pakistan
6. In vitro antimicrobial activity of compounds isolated from various parts of *Polyalthialongifolia* var. *Pendula*. 6th international biennial conference on microbiology. 18-22 March 2007. Islamabad, Pakistan
7. Studies on antimicrobial activity of compounds of *Tagetes erecta*. 6th international biennial conference on microbiology. 18-22 March 2007. Islamabad, Pakistan
8. Fungal transformation of 1R, 2S, 5R (-) - menthol by *Rhizopus* species. 6th international biennial conference on microbiology. 18-22 March 2007. Islamabad, Pakistan
9. Pectinase from native fungal strains. Presented in 9th international symposium on Protein Structure Function Relationship, Jan 11 – 14, 2007. Karachi Pakistan
10. Fermentative production of cellulases by *Aspergillus niger* MS82 and their partial characterization. Presented in First International Conference on Biotechnology and Informatics. Held on 10 – 12 April, 2006. Organized by Balochistan University of Information Technology and Management Sciences, Quetta, Pakistan.
11. Screening and characterization for fungal cellulases. Presented in Fifth International Biennial Conference of Pakistan Society for Microbiology. Held on Jan 10 – 15 2005, at Karachi, in collaboration of HEC, Islamabad
12. Microbial Transformation of Nimulicin. Presented in Fifth International Biennial Conference of Pakistan Society for Microbiology. Held on Jan 10 – 15 2005, at Karachi, in collaboration of HEC, Islamabad.
13. Production kinetics and partial characterization of cellulose degrading enzymes from a native *Aspergillus niger* strain. Presented in 18th FAOBMB Symposium: Genomics and Proteomics in Health and Agriculture. Held on 20 – 23 Nov 2005.

Courses taught

Has experience of teaching various courses at B.S./ B Sc (H)/ M Sc level including General Microbiology, Applied Microbiology, Enzymology, Microbial Enzyme Technology, Bacterial Genetics, Microbial Anatomy and Physiology, Protein structure/function, Marine Microbiology,

Fermentation Microbiology, Research Methodology, Biodiversity and Environment.

Additional services to the Department

In addition to teaching, providing some services to the Department such as, in Biological Product Section, as Incharge non-teaching staff, maintenance and uplifting of the Department.

Training Courses

1. Professional Competency Enhancement Training. Organized by National Academy of Higher Education, Pakistan. April 2010.
2. Effective teaching methods: Jan 05-17, 2008. Organized by Department of Special Education, University of Karachi.
3. Academic Writing Skills. June 11-20, 2007. Organized by Pakistan Society for Microbiology.
4. Characterization of Protein organized by HEJ research institute, Jan 15 – 22, 2007
5. Teacher's training course: July 11 – 23, 2005. organized by FUUAST, A R Management and NIPA

Symposia Workshops and Seminars

1. As Resource person in “ASM-KU National Microbiology Teachers Training Workshop” September 27-30, 2013, organized by American Society for Microbiology, Pakistan Society for Microbiology and the Department of Microbiology, University of Karachi As Resource Person in the workshop on “Continuing Education for Laboratory Staff”. June 27-28, 2013 Organized by the Department of Microbiology, University of Karachi.
2. As Resource Person in “KU-Workshop on Microscopy”. June 19-20, 2013. Organized by the Department of Microbiology, Centre for Plant Conservation and PCMD, ICCBS, University of Karachi.
3. Member Technical Committee, First National Symposium on Microbiology, FUUAST, Karachi, Pakistan.
4. As resource person in “Training Workshop for Laboratory Staff”. Dec 19-21, 2006. Organized by Dean Faculty of Science and Institute of Environmental Studies, University of Karachi. Karachi, Pakistan

PERSONAL

Name: Yasir Raza
Date of Birth: May 3, 1983
Residence: Room#203, Department of Microbiology, University of Karachi
Marital Status: Married
E-mail: yasir.raza@uok.edu.pk
Cell: +92-343-2595130

EDUCATION

Doctor of Philosophy (PhD-2012): Microbiology
Department of Microbiology, University of Karachi

Title of Dissertation: *Helicobacter pylori* Infection and Host Genetic Factors in Human Gastric Carcinoma.
Supervisor: Prof Dr Shahana Urooj Kazmi

Master of Science (M.Sc.-2006): Microbiology
Department of Microbiology, University of Karachi

Bachelor of Science (B.Sc. Hons.-2005): Microbiology
Department of Microbiology, University of Karachi

PROFESSIONAL EXPERIENCE

Assistant Professor (February 2017-present), Department of Microbiology, University of Karachi.

Courses Assigned:

- General Microbiology
- Medical Microbiology
- General Virology
- Advanced Virology/Molecular Biology of Viruses
- Systematics and Immunology
- Cell and Tissue Culture Techniques

Consultant Pathologist (Molecular Pathology) at One Health Diagnostics. Karachi
• Established the department of Molecular Pathology

Research Consultant (Microbiology) at Dr Essa Laboratory and Diagnostic Center. Karachi

Visiting Faculty at Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology (SZABIST).

Lecturer (March 2015-February 2017), Stem Cell Research Laboratory, Sind Institute of Urology and Transplantation.

Research Associate (September 2012-February 2015), Stem Cell Research Laboratory, Sind Institute of Urology and Transplantation.

Research Associate (Short Term Scholar from January 2011 to June 2011), Department of Cellular and Molecular Medicine, College of Medicine, University of Arizona, Tucson, USA

Medical Technologist from January 2007 to December 2007, in the department of Molecular Pathology, Aga Khan University and Hospital.

MPhil/PhD Supervision

- Supervised 02 PhDs and 02 MPhils
- 02 PhDs and 03 MPhils are in progress

PhD Research Topics:

1. Effect of oxidative stress on Murine mesenchymal stem cells induced by platinum based drugs. (2022)
2. Investigating the current HIV epidemic in Pakistan and its comparison with HIV epidemic in Africa using molecular and bioinformatics tools. (2023)

MPhil Research Topics:

1. Comparative analysis of food quality in Karachi, Pakistan (2023)
2. Qualitative analysis of yeast and molds count in various foods and beverages of Karachi, Pakistan (2023)

PUBLICATIONS:

1. Shoaib, A., Sultan, A., Shafiq, J., Abbas, G., Soomro, R., & Raza, Y. (2023). **Evaluating Fluoxetine's Growth-Inhibitory Impact on Clinical Isolates of Enteric Bacteria: Harnessing Repurposing Potential.** *Microbiological & Immunological Communications*, 2(02), 89–96. <https://doi.org/10.55627/mic.002.02.0454>
2. Urooj Sh, Mirani ZA, Pathan FA, Mustafa Gh, Aziz M, Jabeen B, Shah SH, Ullah A, Hassan N, Khan MN, Raza Y. **Silicon nanoparticles: A promising approach for control of Pseudomonas aeruginosa biofilms.** *Iran J Basic Med Sci* 2023; 26:
3. Soomro T, Soomro R, Urooj S, Ahmed Shaikh I, Raza Y, et al. (2022) **Microbial Assessment of Spices Available In Different Markets of Karachi, Pakistan: A Food Quality Index Assessment Approach.** *J Food Sci Nutr* 8: 146.
4. Zahid, M., Khan, S., Muhammad Asif Qureshi, & Yasir Raza. (2022). **Subgenomic sequence analysis reveals emergence of new circulating recombinant forms of HIV-1 in Pakistan.** *Pakistan Journal of Medical Sciences*, 38(7). <https://doi.org/10.12669/pjms.38.7.5591>
5. Jabeen, S., Vohra, M. S., & Raza, Y. (2022). **Isolation and identification of Murine Mesenchymal Stem Cells from Bone Marrow.** *International Journal of Endorsing Health Science Research (IJEHSR)*, 10(2), 150-156. <https://doi.org/10.29052/IJEHSR.v10.i2.2022.150-156>
6. Ejaz, S. M., Vohra, M. S., & Raza, Y. (2022). **Prevalence and Antibiotic Susceptibility Pattern of Isolates from Patients with Urinary Tract Infection in Karachi.** *Microbiological & Immunological Communications*, 1(01), 07–19. <https://doi.org/10.55627/mic.001.01.0179>
7. Raza, Y., Ahmed, A., Khan, A., Chishti, A. A., Akhter, S. S., Mubarak, M., Bernstein, C., Zaitlin, B., Kazmi, S. U. (2020). **Helicobacter pylori severely reduces expression of DNA repair proteins PMS2 and ERCC1 in gastritis and gastric cancer.** *DNA Repair*, 89, 102836. doi: <https://doi.org/10.1016/j.dnarep.2020.102836>
8. Farooq, U., Ahmad, T., Khan, A., Sarwar, R., Shafiq, J., Raza, Y., Ahmed A, Ullah S, Ur Rehman N, AlHarrasi A. (2019). **Rifampicin conjugated silver nanoparticles: a new arena for development of antibiofilm potential against methicillin resistant Staphylococcus aureus and Klebsiella pneumoniae** (Vol. Volume 14).
9. Aziz, M., Garduno, R., Mirani, Z., Baqai, R., Sheikh, A., Nazir, H., Raza, Y., Ayaz, M., & Urooj Kazmi, S. (2019). **Determination of antimicrobial effect of protamine by transmission electron microscopy and SDS PAGE on Pseudomonas aeruginosa isolates from diabetic foot infection.** *Iranian Journal of Basic Medical Sciences*, -. doi: 10.22038/ijbms.2019.32414.7989

10. Farooq, U., Naz, S., Shams, A., Raza, Y., Ahmed, A., Rashid, U., & Sadiq, A. (2019). **Isolation of dihydrobenzofuran derivatives from ethnomedicinal species *Polygonum barbatum* as anticancer compounds.** *Biological Research*, 52(1), 1. doi: 10.1186/s40659-018-0209-0
11. Zeeshan Khan, F., Nawaz, T., Mirani, Z., Khan, S., Raza, Y., & Urooj Kazmi, S. (2018). **Study of class 1 integrons in multidrug-resistant uropathogenic *Escherichia coli* isolated from different hospitals in Karachi.** *Iranian Journal of Basic Medical Sciences*, 21(10), 1079-1082. doi: 10.22038/ijbms.2018.28807.6966
12. Bukhari, M. H., Batool, S., Raza, Y., Bagasra, O., Rizvi, A., Shah, A. Sultan, T. (2018). **DNA electromagnetic properties and interactions -An investigation on intrinsic bioelectromagnetism within DNA.** *Electromagn Biol Med*, 1-6. doi: 10.1080/15368378.2018.1499032
13. Raza, Y., Khan, A., Khan, A. I., Khan, S., Akhter, S., Mubarak, M., Kazmi, S. U. (2017). **Combination of Interleukin 1 Polymorphism and *Helicobacter pylori* Infection: an Increased Risk of Gastric Cancer in Pakistani Population.** *Pathol Oncol Res*, 23(4), 873-880. doi: 10.1007/s12253-017-0191-9
14. Nasrat AM, Al-Ayoubi E, Raza Y (2015) **Functional Dyspepsia.** *J Clin Case Rep* 5:516. doi:10.4172/2165-7920.1000516
15. Ansari SA, Khan A, Khan TA, Raza Y, Syed SA, Akhtar SS, Kazmi SU., 2014. **Correlation of ABH blood group antigens secretion with *Helicobacter pylori* infection in Pakistani patients.** *Trop. Med. Int. Health* 2015 Jan; 20(1):115-9
16. Raza, Y., Khan, A., Farooqui, A., Mubarak, M., Facista, A., Akhtar, S. S., Kazmi, S. U. (2014). **Oxidative DNA damage as a potential early biomarker of *Helicobacter pylori* associated carcinogenesis.** *Pathol Oncol Res*, 20(4), 839-846. doi: 10.1007/s12253-014-9762-1
17. Khan A., Farooqui A., Raza Y., Rasheed F., Manzoor H., Shakeel A., Saeed Q., Rubino S., Kazmi S. U., Paglietti B. 2013. **Prevalence, diversity and disease association of *Helicobacter pylori* in Pakistan.** *J. Infect Dev Ctries*; 7(3): 220-228.
18. Raza Y., and Kazmi S.U., 2012. ***Helicobacter pylori* associated gastric cancer.** *Karachi University Journal of Science*, 40:41-44.
19. Azizun-Nisa, Hasan S.H., Raza Y. 2011. **Primary renal leiomyosarcoma.** *J.Coll Physicians Surg Pak. Nov*; 21(11):713-4.
20. Ahmed A., Khan T.A., Kanwal B., Raza Y., Akram M., Rehmani S.F., Lone N.A. and Kazmi S.U., 2009. **Molecular identification of agents causing respiratory infections in chickens from southern region of Pakistan from October 2007 to February 2008.** *Int. J. Agri. Biol.*, 11: 325-328

TECHNICAL SKILLS

Molecular Biology and Biochemistry

Polymorphism studies

Polymerase Chain Reaction (PCR), Reverse Transcriptase PCR, Real Time PCR

Gel purification of PCR products

Mini-prep and enzymatic digestion in preparation for sequencing

DNA and RNA Extractions from biological samples

Molecular identification and genotyping of bacteria and viruses

Agarose gel electrophoresis

Sodium dodecyl Sulphate polyarylamide gel electrophoresis (SDS PAGE)

Restriction Fragment Length Polymorphism (RFLP)

Cell culture techniques

Transfection assays
Microbiology and Immunology
Western Blotting
Enzyme Linked Immuno Sorbent Assay (ELISA)
ELISPOT assay
Immunoprecipitation
Immunohistochemistry
Work safely in Biosafety Level 2 facilities
Microscopy and staining
Cultivation and sensitivity assays
Animal handling techniques

HONORS & AWARDS

1. Indigenous PhD Scholarship awarded by Higher Education Commission of Pakistan.
2. Travel grant from United European Gastroenterology to attend and deliver oral presentation in UEG week 2019, Barcelona, Spain.
3. Travel award from the American Association for the Advancement of Science (AAAS) to attend "The International Conference on Tissue Preservation and Biobanking" held in Barcelona, Spain from July 20-23, 2015.
4. Travel award from U.S. Department of State to participate in the Biosafety and Security Training at the JW Marriott Hotel and National Center for Genetic Engineering and Biotechnology (BioTec). Organized by the U.S. Department of State's Biosecurity Engagement Program (BEP), Thailand-Bangkok from June 21-June 28, 2008.
5. Travel award from U.S. Department of State to participate in 109th General meeting of American Society for Microbiology (ASM) in Philadelphia, Pennsylvania, May 17 -21, 2009
6. Travel award from Sandia National Laboratories, NM to attend a training course on Controlling Laboratory Biorisks in Sandia Laboratories, Albuquerque, New Mexico, Sept 28 - Oct 3, 2009

TRAININGS

International:

1. **One Health- 52 Weeks of Biosafety Program** (2019) conducted by American Society of Microbiology.
2. **Grant Writing Workshop** by American Society of Microbiology's Grant Writing Institute, September 30th-October 4th 2018, in Abu Dhabi, UAE.
3. Certificate course on "**Controlling Laboratory Biorisks**", September 28 – October 2, 2009, offered by The International Threat Reduction Department, Sandia National Laboratories, Albuquerque, NM.
4. Certificate course on "**The Transportation of Infectious Substances and Diagnostic Specimens Course**", October 3, 2009, offered by The International Threat Reduction Department, Sandia National Laboratories, Albuquerque, NM. This training course exceeded all IATA/ICAO requirements.
5. **Biosafety and Security Training** at the JW Marriott Hotel and National Center for Genetic Engineering and Biotechnology (Biotech) in Pathumthani Bangkok. Organized by the U.S. Department of State's Biosecurity Engagement Program (BEP), Thailand- Bangkok from June 21-June 28, 2008

National:

1. **Master Trainer Workshop** by Pakistan Biological Safety Association (PBSA), Islamabad, and the Fogarty International Center (FIC) at the National Institutes of Health (NIH), USA from January 14th–18th, 2019 at COMSTECH, Islamabad.

2. **Training of Trainer Workshop (TOT)** by Pakistan Biological Safety Association (PBSA), Islamabad, and the Fogarty International Center (FIC) at the National Institutes of Health (NIH), USA from October 23rd - 27th, 2018 at COMSTECH, Islamabad.
3. Participated in **International Conference on Lung Diseases and Tuberculosis/HIV**, February 21-23, 2009 at Dow University of Health Sciences.
4. Participated in the National Core Group Life Sciences-HEC 2nd National Workshop on **“Techniques in Molecular Biology, Bioinformatics and Vaccine Production”** from 27th to 30th May, 2008.
5. Participated in **“Bio-safety and Bio-security training”** Held in June 2007 at Aga Khan University supported by the U.S. department of State Bio-security Engagement Program.

CONFERENCE/WORKSHOP PARTICIPATION

International

1. **United European Gastroenterology (UEG) Week 2019**, Barcelona, Spain, October 19-23, 2019.
2. **109th General meeting of American Society for Microbiology (ASM)** in Philadelphia, Pennsylvania, May 17 -21, 2009.
3. **International Conference and Exhibition on Tissue Preservation and Biobanking**, held in Barcelona, Spain from July 20-23, 2015.

National

1. **First National Conference of Microbiology**, Department of Microbiology, Shah Abdul Latif University, Khairpur, November 21-22, 2009
2. **35th All Pakistan Science Conference Genomics for Health and Prosperity**, University of Karachi, Karachi, December 20-23, 2008
3. **2nd Biennial National Conference in Chemical Pathology**, Aga Khan University, Karachi, March 9-10, 2007
4. **International Symposium to celebrate 40 years of SIUT**, SIUT, Karachi, December 8-12, 2015

ORAL PRESENTATIONS

1. **Reciprocal Expression of 8-OHdG and DNA Repair Proteins in the Progression of *Helicobacter pylori* Associated Gastric Cancer**. UEG Week 2019, October 19-23, 2019, Barcelona - Spain
2. **A Comparison of Cultural, Molecular and Histological Diagnosis of *Helicobacter pylori* Infection in Patients with Gastritis**. 35th All Pakistan Science Conference, University of Karachi, Karachi, December 20-23, 2008

POSTER PRESENTATIONS

1. **Raza Y. et al. Identification of *Helicobacter pylori* Infection in Gastric Biopsy and Resection Specimens of Human Gastric Cancer by Targeting *16S rRNA*, *ure A*, *Hsp60* and *cag A***. 110th General meeting of American Society for Microbiology (ASM) in San Diego, CA. May 23-27, 2010
2. **Raza Y. et al. *CagA*, *BabA* positive *Helicobacter pylori* Associated Gastrointestinal Diseases**. 110th General meeting of American Society for Microbiology (ASM) in Louisiana, New Orleans, USA. May 21-24, 2011
3. **Raza Y. et al. Enhanced 8OHdG Expression in *Helicobacter pylori* Positive Gastric Cancers**. 110th General meeting of American Society for Microbiology (ASM) in San Francisco, California, USA. June 16—19, 2012

4. Jabeen S., *Raza Y.*, Ghayas H., Batool S. and Mubarak M. **Oxaliplatin Induced Variations in Transcription of a Panel of Genes Involved in Key Metabolic Events in Parental and Resistant Murine Mesenchymal Stem Cells.** SIUT symposium 2015, 2015.
5. Samreen B., *Raza Y.*, Jabeen S., Batool S., Muzzafar R., **Cisplatin and Oxaliplatin Induced Variations in Transcription of a Panel of Genes Involved in Key Metabolic Events in Colorectal Cancer Cell Lines.** SIUT symposium 2015, 2015.
6. *Raza Y.*, Anis S. **Expression Profile of a Panel of miRNAs in Colorectal Cancer Cell Line HT29 and Cancer Stem Cells.** SIUT symposium 2015, 2015.

CONFERENCES AND WORKSHOP CONDUCTED/ORGANIZED

1. **Twelfth International Biennial Conference of Pakistan Society for Microbiology**, Abbottabad University of Science and Technology, February 19 – 22, 2019
2. **Eleventh International Biennial Conference of Pakistan Society for Microbiology**, Bahauddin Zikriya University Multan, October 23-25, 2017.
3. **35th all Pakistan Science Conference**, University of Karachi, Karachi, December 20- 23, 2008.

PROFESSIONAL MEMBERSHIPS

1. Member of American Society for Microbiology (ASM)
2. Life time member of Pakistan Biological Safety Association (PBSA)

VOLUNTEER ACTIVITIES

1. Actively participated in fund raising programs for the relief and rehabilitation of 2005- earthquake survivors, 2005.
2. Participated in fund raising programs for the relief and rehabilitation of 2008-earthquake survivors in Baluchistan, 2008.

REFERENCES

Prof Dr Shahana Urooj Kazmi
Vice Chancellor
Swabi University for Women
Email: shahanaurooj@yahoo.com

Prof Dr Carol Bernstein
Department of Cellular and Molecular Medicine
College of Medicine
University of Arizona, Tucson, AZ 85724
Email: Bernstein324@yahoo.com

Prof Dr Muhammad Mubarak
Department of Histopathology
Sindh Institute of Urology and Transplantation
Email: drumubaraksiut@yahoo.com

Curriculum Vitae

Dr. Salman Gulzar

Associate Professor and Director

Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization

University of Karachi, Karachi-75270, Phone (Cellular): 92-3222494474

Email: salmang@uok.edu.pk, Webpage: www.halophyte.org

Major Research Interests

Dr. Gulzar's research deals with the ecophysiology of coastal and inland salt marsh halophytes or salt tolerant plants. Halophytes have unique and diverse structural and functional adaptations for photosynthesis and nutrient uptake to thrive in stressful conditions such as high flooding, salinity and drought. The dynamic responses of halophytes indicate possibilities for improving tolerance and yield of food crops for the ever growing human population which is otherwise threatened by large variations due to climatic change. Many halophytes can be used directly and sustainably as sources of food and food supplements besides their potential as feed fiber and fuel in a variety of degraded habitats and climatic conditions. The ultimate aim of his research is to raise awareness about the importance of conserving and protecting the highly productive coastal ecosystems as major carbon sinks, and to ensure food security through sustainable development and utilization of salt tolerant future crops in an environment friendly manner.

Education

- 1994-2001 Department of Botany, University of Karachi, Ph.D.
Thesis Title: Effect of salinity on the germination, dormancy, growth and osmoregulation of halophytic grasses from Karachi. Department of Botany, University of Karachi. Adviser: Prof. Dr. M. Ajmal Khan.
- 1990-1991 Department of Botany, University of Karachi, M.Sc. Project: Seed banks of coastal shrub communities. Adviser: Prof. Dr. M.A. Khan.
- 1986-1990 Department of Botany, University of Karachi, B.Sc. (Hons.)

Professional Experience

- 2023: Professor & Director, Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization, University of Karachi
- 2021 - (till date): Director, Dr. Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization, University of Karachi.
- 2013 – (till date): Associate Professor (BPS), Institute of Sustainable Halophyte Utilization, University of Karachi.
- 2012 – 2013: Post-Doctoral Fellow, School of Biological Sciences, Washington State University, Pullman, WA, USA
- 2012 – 2013: Assistant Professor (TTS), Institute of Sustainable Halophyte Utilization, University of Karachi.
- 2009 – 2013: Assistant Professor, Institute of Sustainable Halophyte Utilization, University of Karachi.
- 2006 – 2009: Assistant Professor, Department of Botany, University of Karachi.
- 2004 – 2006: Assistant Professor of Botany, Government Superior Science College, Shah Faisal Colony, Karachi.
- 1997 – 2004: Lecturer, Department of Botany, Government Superior Science College, Shah Faisal Colony, Karachi.
- 1996 – 1997: Visiting Faculty, Department of Botany, Jinnah University for Women, Nazimabad, Karachi.
- 1992 – 1994: Research Associate, Halophyte Biology Lab., Department of Botany, University of Karachi.

Professional Societies

- 2012: Botanical Society of America (BSA)
- 2009- International Society for Halophyte Utilization (ISHU)
- Life member Pakistan Botanical Society
- Life member Pakistan Society for Biochemistry and Molecular Biology (PSBMB)
- 2006- Karachi University Teachers Society (KUTS)
- 2013- Karachi University Alumni Association
- 1997-2006 College Teachers Botanical Society (CTBS)

Courses Taught (graduate and post-graduate)

(ISHU-771) Plant responses to abiotic stresses; (ISHU-772) Ecology of saline habitats; (ISHU-775) Physiological ecology of halophytes; (Bot-637) Evolutionary ecology; (Bot-630) Seed Biology; (Bot-600A/511) Biostatistics; (Bot-509) Genetics; (Bot-508) Plant Ecology; (Bot-411) Genetics and Biotechnology; (Bot-311) Plant Diversity

Administrative Experience

- 2023 (July) onward: Director, MAK-ISHU
- 2017-2019: Secretary, Landscape and Gardening Council, University of Karachi (Nov.'17 to May 2019).
- 2007 onwards: Acting Director, ISHU on various occasions to look after routine matters.
- 2017: Additional charge of Director, Quality Enhancement Cell (QEC).
- 2006-08: Incharge, Non-teaching Staff, Department of Botany, University of Karachi.

Community Service

- 2022: Viva Voce Examiner and External Reviewer of M.Phil. Thesis of Mr. Zia Ul Haq, LUWAMS entitled "Effect of beeswax and Lemon grass Oil on *Alternaria alternata* and post-harvest quality of bitter gourd during storage", submitted to the Department of Horticulture, LUAWMS under the supervision of Dr. Ghulam Khaliq, Assistant Professor..
- 2020: Viva Voce Examiner and External Reviewer of M.Phil. Thesis of Mr. Ghulam Ali Manzoor, LUWAMS entitled "Variability in physiological traits of CIMMYT accessions to design integrated breeding strategies for wheat improvement", submitted to the Department of Plant Breeding and Genetics, LUAWMS under the supervision of Dr. S. Rehmatullah Shah, Associate Prof. December 11, 2020.
- 2019: Member, Board of Studies, Khwaja Fareed University of Engineering & Information Technology, Rahim yar Khan.
- 2018: HEC Focal Person for University of Karachi in the PM's Clean and Green Pakistan Program.
- 2019: Viva Voce Examiner of M.Phil. Thesis of Mr. Arsalan Ishaque, LUWAMS entitled "Genetic traits for nitrogen response, dry matter partitioning and growth in phenotypically distinct wheat cultivars". April 04, 2019.
- 2017 (Nov. 2): Member, Committee for resolving the issues of TTS Teachers, University of Karachi, along with Dr. Munawwer Rasheed and Prof. Saleem Shahzad (Convener).
- 2017 (Oct. 23 on): Member, Scholarship Award Committee, University of Karachi for various Student Scholarship Programs (Convener: Dr. Muhammad Sohail).
- 2017 (Oct. 5): Member, Review Committee for Evaluating Examination Results of Affiliated Colleges, University of Karachi.
- 2017 (Sep. 26): Member, Interview Committee for conducting Interviews of Internees for Placement under the Prime Minister's Youth Training Scheme (PMYTS) on Oct.4, 2017) along with Dr. Atif Aslam Rao and Prof. Tariq Masood (Convener).
- 2017 (Aug. 23): Member, Advisory Committee for fast processing of Karachi University Selection Boards.
- 2017 (Feb.-): Committee Member, Centralized Science Laboratory (CSL), University of Karachi.
- 2017: Poster Evaluation Committee, Government Degree Boys and Girls College, S.R.E. Majeed, Karachi.
- 2016: Member, Board of Examiners for MS Thesis of Mr. Muhammad Arslan on "Potential Of Marginal Land of Thatta District For *Jatropha* Cultivation Using Geospatial Techniques", Remote Sensing & Geo-Information Science Institute of Space Technology, Karachi, Aug. 15, 2016
- 2015: Invited in the meeting of curriculum committee of the Faculty of Marine Sciences, Lasbela University of Agriculture, Water and Marine Sciences, Uthal, Balochistan, March 2015
- 2012: Member, Oral presentation Evaluation Committee, Botanical Society of America (BSA), Columbus OH, USA.
- 2010-on: Member, Board of Faculty of Science, University of Karachi.
- 2010-on: Member, Departmental Research Committee, Institute of Sustainable Halophyte Utilization, University of Karachi
- 2004: Member, Organizing Committee, HEC Workshop on "Current Trends in Plant Sciences" (August 23-26), Department of Botany, University of Karachi.
- 2003: Member, Organizing Committee, "8th National Conference of Plant Scientists", University of Karachi, Karachi, Pakistan.
- 2000: Member, Organizing Committee, International conference on "Technology and Development in the New Millennium", University of Karachi, Karachi, Pakistan. Venue: Avari Hotel, Karachi
- 1995: Member, Organizing Committee, Third International Conference on "Food Science and Technology" Department of Food Science, University of Karachi.
- 1994: Member, Organizing Committee, International Symposium on "High Salinity Tolerant plants", Department of Botany, University of Karachi.

Research Grants Awarded

- 2022: "Ecophysiology of *Tamarix aphylla*, a floriculture plant for saline soils", Rs.150,000/-. Funded by the Faculty of Science, University of Karachi. No. 114 / 2021 – 22.
- 2018: "Effects of salinity on the leaf-level growth, physiology and biochemistry of the medicinal plant – *Commiphora wightii*". Faculty of Science Research Grant. Rs.100,000/-
- 2018: Deans Student Grant 20,000/-
- 2017: "Ecological mapping of halophytes at Karachi coast through SRS techniques", Rs. 5.03 Million. Higher Education Commission, Islamabad. No. 20- 6619 /HEC/R&D/2017.
- 2016: Ecology and Socio-economic role of *Prosopis juliflora* and *Prosopis cineraria* in Lasbela District Balochistan, Pakistan. Rs. 4903,313/- Funded by Higher Education Commission of Pakistan. No. 20-4255/R&D/HEC/14/1239.
- 2016: "Phytoremediation potential of saline soils by a succulent xero-halophyte". Rs. 100,000/- Funded by the Faculty of Science, University of Karachi.
- 2014: "Fodder and forage value of *Sporobolus tremulus* under saline conditions" Rs.150,000/-, Funded by the Faculty of Science, University of Karachi.
- 2010 Maintenance grant for scientific instruments. Rs.1,000,000/-, by the Higher Education Commission, Islamabad.
- 2009: Research grant for PhD students. Rs.20,000/-. Funded by the Faculty of Science, University of Karachi.
- 2009: Water and ion relations of two salt tolerant grasses. Rs.70,000/-, Funded by the Faculty of Science, University of Karachi.

- 2007: Small scale resource heterogeneity among halophytes in some coastal communities of Pakistan. Rs.44,07,420/-, National Research Program for Universities (NRPU-02-923/07) project, Funded by HEC, Islamabad. (Nov. 2007 to Oct. 2010).
- 2007: Research grant for PhD students. Rs.17,500/-. Funded by Faculty of Science, University of Karachi.
- 2007: "Role of chemicals in alleviating salinity enforced seed dormancy in *Suaeda fruticosa*" Rs.60,000/-, Faculty of Science project, Funded by Faculty of Science, University of Karachi.

Awards and Honors

- 2012: HEC Post-Doctoral Fellowship Award (Phase V) for research on "Plant adaptations to extreme habitats: Structural and physiological diversity in forms of photosynthesis among halophytes from the Arabian Sea coast of Pakistan" at Washington State University, Pullman, WA, USA.
- 2009: Cash award of Research Productivity Allowance (RPA) Rs.60,000/- from Pakistan Council for Science and Technology, Islamabad.
- 2006: Cash award of Research Productivity Allowance (RPA) Rs.2,10,000/- from Pakistan Council for Science and Technology, Islamabad.
- 2004: Cash award of Research Productivity Allowance (RPA) Rs.1,20,000/- from Pakistan Council for Science and Technology, Islamabad.
- 2003: Cash award of Rs. 60,000/- as Research Productivity Allowance (RPA) from Pakistan Council for Science and Technology, Islamabad.
- 2005: Ranked among the biologists of Pakistan by Pakistan Council of Science and Technology, Islamabad in their publication entitled "Productive Scientists of Pakistan-2005" based on Information Science Institute, Baltimore, US "Journal Citation Report (JCR)".
- 2004: 16th Protocol of Science and Technology between Pakistan-China, Institute of Agricultural Modernization, Shijiazhuang, P.R. China, with Prof. Dr. M.A. Khan (December, 2004). 2004 onward: HEC Approved Supervisor for PhD level students by the Higher Education Commission, Islamabad.
- 2003: Ranked among the biologists of Pakistan by Pakistan Council of Science and Technology, Islamabad in their publication entitled "Productive Scientists of Pakistan-2003" based on Information Science Institute, Baltimore, US "Journal Citation Report (JCR)".

Reviewer of Manuscripts / Research Projects

- 2024: Frontiers in Plant Science, Pakistan Journal of Botany
- 2022: Frontiers; Environmental and Experimental Botany; Pakistan Journal of Agricultural Research.
- 2021: Environmental and Experimental Botany, Arabian Journal of Chemistry; Plant and Soil
- 2020: Plant and Soil; Ecological Processes; Environmental & Experimental Botany; Frontiers; Tree Physiology
- 2019: Plant and Soil; ENMO
- 2016-2018: Frontiers in Plant Science (*Review Editor*, Editorial Board, Plant Abiotic Stress section).
- 2016: PeerJ; Ecological Processes.
- 2015-2016: Acta Physiologiae Plantarum
- 2013- Journal of Arid Environments
- 2009- Pakistan Journal of Botany
- 2008: Biologia
- 2005- HEC Research Projects, Islamabad, Pakistan.
- 2003: Special Edition – Pakistan Journal of Botany.
- 2003-2006: Egyptian Journal of Desert Research, Cairo.
- 2012- African Journal of Biotechnology
- 2012: Water, Air and Soil Pollution (WATE)
- 2012: PLoS ONE (Public Library of Science)
- 2014- Frontiers

Student Research Supervision

- Hamza Khan (Ph.D.): Supervisor "**Plasticity in photochemical responses of coastal halophytes – a climate change perspective**", Enrolled in Ph.D. 2023, ISHU, (Ongoing).
- Shabana Afsar (Ph.D.): Supervisor "**Ecophysiology and photobiology of the leaf succulent halophyte *Salsola imbricata***". ISHU, University of Karachi, (July 2013 -2021; Awarded 2022).
- Hamza Khan (M.Phil.): Supervisor "Light and salinity responses of a biofuel candidate - *Sporobolus tremulus*" (2018-2021; Awarded 2023).
- Tooba Khan (Ph.D.): Co-Supervisor [Supervisor - Dr. Muhammad Sohail, Dept. of Microbiology, UoK, ongoing], Title: Exploring Enzymatic Potential of Endophytic Microorganisms from *Arthrocnemum macrostachyum*. (Enrolled in 2021; In progress)

Syeda Nida Fatima (M.Phil.)	Comparison of photosynthesis and photo-protection of C ₃ & C ₄ halophytes from saline microhabitats of Karachi University Campus. (Awarded 2023)
Masooma Hassan (Ph D):	Co-Supervisor [Supervisor - Dr. Muhammad Sohail, Dept. of Microbiology, UoK, ongoing], Title: Studies on Pectinase production from halophilic/ halotolerant bacteria using halophytic biomass and biotechnological application, (2019 – Ongoing).
Muhammad Imad Ansari (M Phil):	Co-Supervisor [Supervisor: Dr. Muhammad Sohail, Dept. of Microbiology, UoK, ongoing], Title: Evaluation of the potential of bacterial enzyme cocktail for the saccharification of halophytic biomass, (Enrolled Feb 16-22, 2019; Degree awarded)
Mr. Maqbool Rodini (M.Phil.)	Title: "Effect of salinity on the growth and phenotypic characteristic of <i>Commiphora wightii</i> : A medicinal desert shrub from Lasbela, Balochistan". As Co-Supervisor, [Supervisor – Dr. Abdul Hameed Baloch, LUAWMS, Uthal, Balochistan, Awarded 2018].
Mr. Baloch Khan (M.Phil.)	Title: "Ecological assessment of <i>Commiphora wightii</i> (Arnott) Bhandari: An important medicinal plant of Lasbela District". As Co-Supervisor, [Supervisor – Dr. Abdul Hameed Baloch, LUAWMS, Uthal, Balochistan, Awarded 2018].
Ms. Nadia Mushtaq (Ph.D.)	Co-Supervisor, [Supervisor – Prof. Dr. Jameel H. Kazmi, KU], Evaluation of Biodiversity of Halophytes along Karachi Coast through Geospatial Techniques, (Submitted June 2019).
Mr. Mr. M. Moinuddin (Ph.D.)	Supervisor, "Salt tolerance and nutritive status of halophytic grasses of Pakistan", ISHU, University of Karachi, Awarded Sep 2013.
Ms. Shahjehan Anees (M.Sc.)	Supervisor "Effect of seed priming with various chemicals on the germination of halophytic species". 2008. Department of Botany, University of Karachi.
Ms. Hina Siddiqui	HEC Research project "Small-Scale Resource Heterogeneity among Halophytes in Some Coastal Communities of Pakistan". 2009-2010. ISHU, University of Karachi.
Ruby Daud (M.Phil.) Usool Uddin	Co-Supervisor. ASRB letter Mar 14, 2022 (ongoing), Title:

"علم نبات کے فوائد قرآن اور عصر حاضر کے تناظر میں"

Conferences, Workshops, Poster Presentations

- 2023: Organized an International Conference on "Saline Resource Management in the Context of Global Climate Changes" February 23-25, 2023, Funded by the Sindh Higher Education Commission, Karachi.
- 2022: Organized a Dr. Muhammad Ajmal Khan Lecture on "Bacillus: a wonderful genus", by Prof. Dr. Shakeel Ahmed Khan, VC, Salim Habib University, Karachi at the occasion of the 15th Foundation of the MAK-ISHU, University of Karachi, January 20, 2022.
- 2022: Organized a Dr. Muhammad Ajmal Khan Lecture on "Microgravity through Clinostat" by Ahsan Shaukat on November 07, 2022" by Mr. Ahsan Shaukat is Manager Robotics, SUPARCO, Karachi, Pakistan.
- 2022: Organized a Dr. Muhammad Ajmal Khan Lecture on "Developing a successful business proposal - a primer" by Syed Nadeem Tanveer on March 25, 2022.
- 2021: "International Virtual Conference on Ecophysiology and Sustainable Use of Cash Crop Halophytes - A Tribute to Dr Muhammad Ajmal Khan". Organized by Dr Muhammad Ajmal Khan Institute of Sustainable Halophyte Utilization, University of Karachi from April 06 to 08, 2021.
- 2020: The Third Meikong Mangrove Forum (Oct. 01, 2020). Organized by UNEP, Bangkok, Hong Kong (Online zoom webinar).
- 2020: World Science Day for Peace and Development (Nov, 19, 2020). Organized by Dr. Muhammad Ajmal Khan ISHU, University of Karachi (Online zoom webinar).
- 2019: Member organizing committee of 2nd International Conference on Sustainable Development: Halophytes for Green Revolution" 7-9 January, 2019. ISHU.
- 2018: Invited paper presentation entitled "Adaptations of a medicinal halophyte to combined light and salt stress conditions". University of Swat, Swat. 2nd International Conference on "Conservation of Medicinal and Aromatic Plants for Improving the Livelihood of Mountain Communities through Industrial Linkages. Sep. 3-5, 2018.
- 2018: Session Chair of the 2nd session (September 25, 2018) on "Agricultural Ethics and the Belt and Road initiative of Chinese Government" in the "4th International Grassland Agro-ecosystems Conference (4th IGAC)" in Lanzhou, China (September 25-27, 2018).
- 2018: Invited Keynote Speaker on "Effect of salinity on chlorophyll fluorescence and CO₂ fixation of subtropical grasses" in the "4th International Grassland Agro-ecosystems Conference (4th IGAC)" in Lanzhou, China (September 25-27, 2018).
- 2017: International Symposium on High Efficient Utilization of Saline Resources on September 20-22, 2017 in Cangzhou City, Hebei Province, China.
- 2017: 15th National & 6th International Conference of Botany, Pakistan Botanical Society, Sardar Bahadur Khan University for Women, Quetta (May 9-11, 2017).
- 2016: 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", ISHU, University of Karachi (Dec. 5-7, 2016).
- 2016: PAS Workshop entitled "Sustainable Development and Environment Protection" at ISHU, University of Karachi (Dec. 3-4, 2016).
- 2016: One day Seminar on World Science day entitled: Science for a sustainable future, ISHU, University of Karachi (Nov. 10, 2016).
- 2016: 14th National & 5th International Conference of Botany, Pakistan Botanical Society, University of Karachi (Jan. 15-18, 2016).
- 2015: Oral presentation on "Differences in photosynthetic adaptations of salt excreting and non-excreting salt marsh grasses in Pakistan" in the 2nd International Conference on Physiological, Biochemical and Molecular Arguments for Salt tolerance" October 12 – 14, 2015 in Qatar University, Doha, Qatar.

- 2015: Invited plenary lecture in the one day seminar on World Day to Combat Desertification and Drought, jointly organized by the Department of Remote Sensing and GISc, Institute of Space Technology (IST) and the Department of Geography, University of Karachi at IST, Karachi, June 16, 2015.
- 2014: Oral presentation on "*Photosynthetic responses of coastal and inland halophytes*" in the International conference on halophytes for food security in dry lands, May 12-13, 2014 in Qatar University, Doha, Qatar.
- 2014: Invited lecture in HEC workshop on "Hands-on Training in Eco-physiological Techniques" organized by The Institute of Sustainable Halophyte Utilization, University of Karachi, April 12-14, 2014.
- 2013: 22nd Western Photosynthesis Conference, 3-6 January 2013, Asilomar Conference Grounds Pacific Grove, California
- 2012: Poster presentation in Botany 2012 conference in Columbus Ohio, USA on "Differences in photosynthetic adaptations of coastal and inland salt marsh grasses in Pakistan". July 7-12, 2012.
- 2011: Presentation on "Non-Saline Agriculture for Arid and Saline Environments" (September 26, 2011) organized by the Cold and Arid Regions Environmental and Engineering Research Institute (CAREERI) in Lanzhou, the People's Republic of China.
- 2011: Paper presentation in PAS Workshop "Advances in Ecophysiology of Salt Tolerance" (April 11-13, 2011). Venue: ISHU, University of Karachi.
- 2011: Paper presentation in "11th National Conference of Plant Scientists". (February 22-24, 2011), Government College University, Lahore, Pakistan.
- 2010: Attended the "Three Days Academic Retreat for HEC Approved Supervisors" (July 29-31, 2010), Sponsored By HEC, Islamabad. Venue: HEC regional Office, Karachi.
- 2009: Paper presentation in "International Thematic Workshop on Recent Advances in Plant Abiotic Stress Tolerance". (October 9-11, 2009), Sponsored By COMSTECH, NIGAB/NARC and PARC/IABGR. Venue: COMSTECH Auditorium, Islamabad
- 2009: "Implementation of the strategy for development of Biotechnology in Pakistan" (27-28 Feb.) organized by Pakistan Biotechnology Information Center (PABIC) at the Latif Ebrahim Jamal National Science Information Center, International Center for Chemical and Biological Sciences, University of Karachi.
- 2008: "International Workshop on Recent Trends in Plant Sciences – Impact on Biodiversity" (April 16-18, 2008), Institute of Sustainable Halophyte Utilization, University of Karachi. Funded by Pakistan Academy of Sciences.
- 2007: Seminar on "New Possibilities in LC/MS, held at Karachi (Jan 18, 2007) organized by BMS-Applied Biosystems, held in Avari Towers Hotel, Karachi.
- 2007: Invited lecture on "Community Concepts" in HEC sponsored workshop on "Advances in Plant Ecology: Ecophysiological Constraints of Plants" (December 17-19, 2007), Department of Botany, University of Agriculture, Faisalabad, Pakistan.
- 2006: Paper presentation in International Symposium on "Strategies for Crop Improvement Against Abiotic Stress", (September 18-20, 2006), Department of Botany, University of Agriculture, Faisalabad, Pakistan.
- 2006: Paper presentation in "9th National Conference of Plant Scientists" (February 13-15, 2006), University of Sindh, Jamshoro, Pakistan.
- 2006: Invited lecture on "Community attributes and vegetation sampling" in Life Sciences- HEC Workshop on advances in Plant Ecology (July 3-6, 2006), Department of Botany, University of Karachi.
- 2005: HEC Workshop on "Current Trends in Flowering Plant Systematics" organized by the Department of Botany, University of Karachi and Higher Education Commission, Islamabad.
- 2005: Life Sciences- HEC Workshop on "Current Trends in Plant Taxonomy and Biosystematics", (April 18-21, 2005). Department of Botany, University of Karachi, Pakistan.
- 2005: Poster Presentation on Recovery of Seed Germination Responses in Halophytes at the "International Conference on Biotechnology for Salinity and Drought Tolerance in Plants". (March 28-31, 2005) in the Pakistan Academy of Sciences Auditorium, Islamabad, organized by the Pakistan Atomic Energy Commission, Islamabad, Pakistan.
- 2005: Invited lecture on "Soil Texture" in the workshop for "Biology Practical" (Feb. 8-12, 2005) organized by Govt. Degree College for Boys and Girls, Stadium Road, SRE Majeed, Karachi in Collaboration with PNS Bahadur, Pakistan Navy.
- 2005: "Five day Refresher Course in Biology (Jan 31 - Feb 4, 2005)" Organized by Govt. D.J. Sindh Govt. Science College, Karachi and Board of Intermediate Education, Karachi.
- 2004: "Six days In-service Training Program for B.Sc. College Teachers of Botany" (December 9-15, 2004)" organized by Karachi Regional Office, HEC.
- 2004: Member, Organizing Committee, HEC Workshop on "Current Trends in Plant Sciences" (August 23-26), Department of Botany, University of Karachi.
- 2003: Member, Organizing Committee, "8th National Conference of Plant Scientists", Univ. of Karachi, Karachi, Pakistan.
- 2000: Poster presentation "7th National Conference of Plant Scientists", Quaid-e-Azam Campus, Punjab Univ., Lahore.
- 2000: Member, Organizing Committee, International conference on "Technology and Development in the New Millennium", University of Karachi, Karachi, Pakistan. Venue: Avari Hotel, Karachi
- 1998: "Botany Workshop", Organized by College Teachers Botanical Society, Karachi and Board of Intermediate Education, Karachi, in DJ Science College (22-23 September, 1998).
- 1995: Member, Organizing Committee, Third International Conference on "Food Science and Technology" Department of Food Science, University of Karachi.
- 1994: Member, Organizing Committee, International Symposium on "High Salinity Tolerant plants", Department of Botany, University of Karachi.

Collaborators: Gerald E. Edwards (USA); Bernardo Duarte (Portugal); H.-W. Koyro (Germany); Xiaojing Liu (China); Ahmad Zia (KSA); Abdul Hameed Baloch (Pakistan).

List of publications

ISI Journal Impact Factor (2023) = 95 (<http://www.scijournal.org>)
Total Citations (2023 = 2373; h-index = 23; i-10 index = 35 (Google Scholar)

1. Zia, A., **Gulzar, S.**, Ruban, A. Enhanced photochemical efficiency of Photosystem II in *Prosopis juliflora* suggests contribution to invasion advantage over native C₃ xero-halophytes under salt stress. *Functional Plant Biology*. (Accepted).
2. Hassan, M., Ejaz, U., Rashid, R., Moin, S.F., Gulzar, S., Sohail, M., Hasan, K.A., Alswat, A.S. and El-Bahy, Z.M. (2023). Utilization of wild *Cressa cretica* biomass for pectinase production from a halo-thermotolerant bacterium. *Biotechnology Journal*, 2200477.
3. Enzyme Profiling and Identification of Endophytic and Rhizospheric Bacteria Isolated from *Arthrocnemum macrostachyum*. 2022. T Khan, OM Alzahrani, M Sohail, KA Hasan, **S Gulzar**, AU Rehman, SF Mahmoud, AS Alswat, SA Abdel-Gawad. *Microorganisms* 10 (11), 2112.
4. Afsar, S., I. Aziz, M. Qasim, A.H. Baloch, M.N. Syed and **S. Gulzar**. (2021). Salt tolerance of a leaf succulent halophyte *Salsola imbricata* – growth and water relations perspective. *International Journal of Biology and Biotechnology*. 18(3): 499-507. ISSN 1810-2719.
5. Ansari, I., Ejaz, U., Abideen, Z., **Gulzar, S.**, Syed, M.N, Liu, J., Wang, L., and Fu, P., Sohail, M. (2021). Wild halophytic *Phragmites karka* biomass saccharification by bacterial enzyme cocktail. *Frontiers in Microbiology Microbiotechnology*. Volume 12, Article 714940 (published: 20 September 2021). doi: 10.3389/fmicb.2021.714940. <https://www.frontiersin.org/articles/10.3389/fmicb.2021.714940/full>
6. Zia, A., Afsar, S., Ruban, A., **Gulzar, S.** (2022). Photochemical efficiency of Photosystem II in *Prosopis juliflora* contributes to invasion advantage over native C₃ xero-halophytes. *Environmental and Experimental Botany* (Submitted).
7. Ahmed, M. Z., Hussain, T., **Gulzar, S.**, Adnan, M.Y., and Khan, M.A. (2021). Calcium improves the leaf physiology of salt treated *Limonium stocksii*: A floriculture crop. *Scientia Horticulturae*, 285: 110190. <https://doi.org/10.1016/j.scienta.2021.110190> <https://www.sciencedirect.com/science/article/abs/pii/S0304423821002971?via%3Dihub>
8. Chan, M.W.H., Akram, J., **Gulzar, S.**, Zafar, U., Aslam, S., Siddiqui, P.J.A., Khan, S.A. and Rasheed, M. (2021). Comparative study on antimicrobial activities of mangroves growing in polluted and non-polluted sites of northern Arabian Sea. *Pak. J. Bot.*, 53(2): 723-729. DOI: [http://dx.doi.org/10.30848/PJB2021-2\(25\)](http://dx.doi.org/10.30848/PJB2021-2(25))
9. **Gulzar, S.**, Hussain T., Gul, B., and Hameed A. (2020). Photosynthetic Adaptations and Oxidative Stress Tolerance in Halophytes from Warm Subtropical Region. In: Springer Nature Switzerland AG 2020. M.-N. Grigore (ed.), *Handbook of Halophytes*, https://doi.org/10.1007/978-3-030-17854-3_52-1. 1.
10. Ahmed, M.Z., Parveen, F., **Gulzar, S.**, Gul, B., and Khan, M.A. (2020). Effects of chloride and sulfate salts on seed germination of halophytes from dry alpine climate. *Journal of Plant Nutrition*, 43(15):2299-2310. Published 29-05-2020
11. Rasool, S.G., **Gulzar, S.**, Hameed, A., Edwards, G.E., Khan, M.A. and Gul, B. 2019. Maintenance of photosynthesis and antioxidant defense system play key role for survival of *Halopeplis perfoliata* (family Amaranthaceae) under saline environment. *Plant Biology*. 21: 1167-1175. <https://doi.org/10.1111/plb.13033>. epub 23 Aug., 2019
12. Ehsen, S., Abideen, Z., R. F. Rizvi, **Salman Gulzar**, I. Aziz, Bilquees Gul, M. Ajmal Khan and Raziuddin Ansari. 2019. Ecophysiological adaptations and anti-nutritive status of sustainable cattle feed *Haloxylon stocksii* under saline conditions. *Flora*. 257: 151425. <https://doi.org/10.1016/j.flora.2019.03.024>
13. Rasool, S.G., Siddiqui, H., Hameed, A., Hussain, T., Aziz, A., Khan, M.A. and **Gulzar, S.** 2019. Temporal variations in water and ion relationships in coastal halophytes. In: *Sabkha Ecosystems: Volume VI: Asia/Pacific*. Eds. Bilquees Gul, Benno Böer, M. Ajmal Khan, Miguel Cluesener-Godt and Abdul Hameed. Springer Nature Switzerland AG. p. 511. <https://doi.org/10.1007/978-3-030-04417-6>.
14. Shoukat E, Abideen Z, Ahmed MZ, **Gulzar S**, Nielsen BL. 2019. Changes in growth and photosynthesis linked with intensity and duration of salinity in *Phragmites karka*. *Environmental and Experimental Botany*. (Published online: 2019 Mar 26) 162: 504-514. <https://doi.org/10.1016/j.envexpbot.2019.03.024>
15. Qasim, M., Abideen, Z., Adnan, M.Y., **Gulzar, S.**, Gul, B., Rasheed, M., Khan, M.A. 2017. Antioxidant properties, phenolic composition, bioactive compounds and nutritive value of medicinal halophytes commonly used as herbal teas. *South African Journal of Botany* 2017 v.110 pp. 240-250.
16. Abbasi, S.B., Gul, B., Khan, N., **Gulzar, S.** and Ahmed, M.Z. 2017. Effect of humic acid on seed germination of sub-tropical halophytes under salt stress. *Pakistan Journal of Botany* 49(6): 2079-2088.
17. Moinuddin, M., **Gulzar, S.**, Hameed, A., Gul, B., Khan, M. A., & Edwards, G. E. 2017. Differences in photosynthetic syndromes of four halophytic marsh grasses in Pakistan. *Photosynthesis Research*, 131(1), 51-64.
18. Ehsen, S., R.F. Rizvi, Z-Ul. Abideen, I. Aziz, **S. Gulzar**, B. Gul, M.A. Khan and R. Ansari. 2017. Physiochemical responses of *Zaleya pentandra* (L.) C. Jeffrey to NaCl treatments. *Pakistan Journal of Botany*. 49(3): 801-808.
19. Hameed, A., **Gulzar, S.**, Aziz, I., Hussain, T., Gul, B., and Khan, M.A. 2015. Effects of salinity and ascorbic acid on growth, water status and antioxidant system in a perennial halophyte. *AoB Plants*, *plv004*.
20. Moinuddin, M., **S. Gulzar**, M.Z. Ahmed, B. Gul, H- W. Koyro, and M.A. Khan. 2014. Excreting and non-excreting grasses exhibit different salt resistance strategies. *AoB plants*, 6, *plu038*.

21. Ali, H., B Gul, M.Y. Adnan, M.Z. Ahmed, I. Aziz, **S. Gulzar**, R. Ansari, M.A. Khan. 2014. NPK mediated improvement in biomass production, photosynthesis and Na⁺ regulation in *Panicum antidotale* under saline conditions. *Pakistan Journal of Botany* 46: 1975-1979.
22. Ahmed, M.Z., **S. Gulzar**, and M.A. Khan. 2014. Role of dormancy regulating chemicals in alleviating the seed germination of three playa halophytes. *Ekoloji* 23: 1-7.
23. **Gulzar, S.**, Hameed, A., Ahmed, M.Z. and Khan, M.A. 2014. Is Soil Heterogeneity the major factor influencing vegetation zonation at Karachi coast? In: M.A. Khan et al. (eds.), *Sabkha Ecosystems: Volume IV: Cash Crop Halophyte and Biodiversity Conservation, Tasks for Vegetation Science* 47, DOI 10.1007/978-94-007-7411-7, 14, Springer, Dordrecht.
24. Hameed, A., M.Z. Ahmed, **S. Gulzar**, B. Gul, J. Alam, A.K. Hegazy, A. Rehman, A. Alatar, and M.A. Khan. 2013. Seed germination and recovery responses of *Suaeda heterophylla* to abiotic stresses. *Pakistan Journal of Botany*. 45: 1649-1656.
25. **Gulzar, S.**, A. Hameed, A.A. Alatar, A.K. Hegazy and M.A. Khan. 2013. Seed germination ecology of *Cyperus arenarius* - A sand binder from Karachi coast. *Pakistan Journal of Botany*. 45: 493-496.
26. Ahmed, M.Z., T. Shimazaki, **S. Gulzar**, A. Kikuchi, B. Gul, M.A. Khan, H.-W. Koyro, B. Huchzermeyer, and K.N. Watanabe. 2013. The influence of genes regulating transmembrane transport of Na⁺ on the salt resistance of *Aeluropus lagopoides*. *Functional Plant Biology*. 40: 860-871.
27. Moinuddin, M., **S. Gulzar**, A.R.A. Alatar, A.K. Hegazy, M.A. Khan. 2012. Evaluation of forage quality among coastal and inland grasses from Karachi. *Pakistan Journal of Botany*, 44, 573-577.
28. Hameed, A., T. Hussain, **S. Gulzar**, I. Aziz, B. Gul, M.A. Khan. 2012. Salt tolerance of a cash crop halophyte *Suaeda fruticosa*: biochemical responses to salt and exogenous chemical treatments. *Acta Physiologiae Plantarum*, 34:2331-2340.
29. Ahmed, M.Z., S.A. Gilani, A. Kikuchi, **S. Gulzar**, M.A. Khan and K.N. Watanabe. 2011. Population diversity of *Aeluropus lagopoides*: A potential cash crop for saline land, *Pakistan Journal of Botany*, 43: 595-605.
30. Aziz, I., B. Gul, **S. Gulzar** and M.A. Khan. 2011. Seasonal variations in plant water status of four desert halophytes from semi-arid region of Karachi. *Pakistan Journal of Botany*, 43: 587-594.
31. Qasim, M., **S. Gulzar**, and M.A. Khan. 2011. Halophytes as medicinal plants. In: Proceedings of International workshop on "Urbanization, land use, land degradation and environment", (29th September to 1st October, 2009), Pamukkale University, Denizli, Turkey, Daya Publishing House.
32. Qasim, M., **S. Gulzar**, Z.K. Shinwari and M.A. Khan. 2010. Traditional ethnobotanical uses of halophytes From Hub, Balochistan. *Pakistan Journal of Botany*, 42: 1543-1551.
33. Hameed, A., M.Z. Ahmed, **S. Gulzar** and M.A. Khan. 2009. Effect of disinfectants in improving seed germination of *Suaeda fruticosa* under saline conditions. *Pakistan Journal of Botany*. 41: 2639-2644.
34. **Gulzar, S.**, M.A. Khan and Xiaojing Liu. 2007. Seed germination strategies of *Desmostachya bipinnata*: A fodder crop for saline soils. *Rangeland Ecology and Management*. 60: 401-407.
35. **Gulzar, S.** and M.A. Khan. 2006. Comparative salt tolerance of perennial grasses. In M.A. Khan and D.J. Weber (eds.), *Ecophysiology of High Salinity Tolerant Plants*. pp. 239-253. Springer, The Netherlands.
36. Aziz, I, **S. Gulzar**, M. Noor and M.A. Khan. 2005. Seasonal variation in water relations of *Halopyrum mucronatum* (L.) Stapf., growing near Sandspit, Karachi. *Pakistan Journal of Botany*. 37: 141-148.
37. **Gulzar, S.**, M.A. Khan, I.A. Ungar and X. Liu. 2005. Influence of salinity on growth and osmotic relations of *Sporobolus ioclados*. *Pakistan Journal of Botany*. 37: 119-130.
38. Shaukat, S.S. and **S. Gulzar**. 2004. Seed germination of three leguminous species and a comparison of germination velocity measures. *International Journal of Biology and Biotechnology*. 1: 161-166.
39. Khan, M.A. and **S. Gulzar**. 2003. Light, salinity and temperature effects on the seed germination of perennial grasses. *American Journal of Botany*. 90: 131-134.
40. **Gulzar, S.**, M.A. Khan and I.A. Ungar. 2003. Effects of Salinity on growth, ionic content and plant-water relations of *Aeluropus lagopoides*. *Communications in Soil Science and Plant Analysis*. 34: 1657-1668.
41. **Gulzar, S.**, M.A. Khan and I.A. Ungar. 2003. Salt tolerance of a coastal salt marsh grass. *Communications in Soil Science and Plant Analysis*. 34: 2595-2605.
42. Khan, M.A. and **S. Gulzar**. 2003. Germination responses of *Sporobolus ioclados*: a potential forage grass. *Journal of Arid Environments*. 53: 387-394.
43. **Gulzar, S.** and M.A. Khan. 2002. Alleviation of salinity-induced dormancy in perennial grasses. *Biologia Plantarum*. 45: 617-619.
44. **Gulzar, S.** and M.A. Khan. 2001. Seed germination of a halophytic grass *Aeluropus lagopoides*. *Annals of Botany* 87: 319-324.
45. **Gulzar, S.**, M.A. Khan and I.A. Ungar. 2001. Effect of temperature and salinity on the germination of *Urochondra setulosa*. *Seed Science & Technology* 29: 21-29.
46. **Gulzar, S.** and M.A. Khan. 1998. Diurnal water relations of inland and coastal halophytic populations from Pakistan. *Journal of Arid Environments* 40: 295-305.
47. Siddiqui, Z.S., S. Ahmed, and **S. Gulzar**. 1997. Effect of Topsisin-M (Methyl-Thiophenate) and Bayleton (Triademiphon) on seedling growth, biomass, nodulation and phenolic content of *Sesbania sesban* (L.) Merril. *Bangladesh Journal of Botany*. 26: 127-130.
48. **Gulzar, S.** and M.A. Khan. 1994. Seed banks of coastal shrub communities. *Ecoprint* 1:1-6.

Published Abstracts

1. Farwa, U., Siddiqui, Z.S., Aziz, I., **Gulzar, S.** and Abideen, Z.U. (2023). Application of compost enhance growth and sustain photosystem II functionality in Maize plants under saline conditions. In: *International conference on saline resource management in the context of global climate changes*, Karachi, Pakistan. (Feb. 23 – 25, 2023).pp.13.
2. Fatima, S.N. and **Gulzar, S.** (2023). Differential photosynthetic responses in broad and needle like leaf species *Salvadora persica* and *Tamarix aphylla*. In: *International conference on saline resource management in the context of global climate changes*, Karachi, Pakistan. (Feb. 23 – 25, 2023).Pp: 33.
3. **Gulzar, S.**, Rasool, S.G., Aziz, I., Qasim, M. and Ahmed, M.Z. (2023). Sea-salt down regulates photosynthetic performance in *Halopyrum mucronatum* compared to iso-osmotic NaCl treatments. In: *International conference on saline resource management in the context of global climate changes*, Karachi, Pakistan. (Feb. 23 – 25, 2023).Pp: 38.
4. Khan, M.H., Afsar, S. and **Gulzar, S.** (2023). Light and Salinity responses of a biofuel candidate – *Sporobolus tremulus*. In: *International conference on saline resource management in the context of global climate changes*, Karachi, Pakistan. (Feb. 23 – 25, 2023). Pp: 39
5. **Gulzar, Salman**, Shabana Afsar and Muhammad Qasim. University of Swat, Swat. In: *2nd International Conference on Conservation of Medicinal and Aromatic Plants for Improving the Livelihood of Mountain Communities through Industrial Linkages*. Sep. 3-5, 2018.
6. **Salman Gulzar** and Edwards, G.E. 2018. Effect of salinity on chlorophyll fluorescence and CO₂ fixation of subtropical grasses. In: *4th International Grassland Agro-ecosystems Conference (4th IGAC)*, Lanzhou, China (September 25-27, 2018).
7. Abdul Hameed Baloch, I. Ahmed, I.A. Malik, Z. Ibrahim, S. Ahmed, **S. Gulzar**, and I.A. Baloch. 2017. Application of geographical information system (GIS) for mapping of *Prosopis juliflora* invasion in Lasbela district, Balochistan. DTSP4-O-35. pp. 250-251. In Proceedings of the "15th National & 6th International Conference of Botany, Pakistan Botanical Society, Sardar Bahadur Khan University for Women, Quetta (May 9-11, 2017)".
8. Muhammad Zaheer Ahmed, Erum Shoukat, Zainul Abideen, Irfan Aziz, **Salman Gulzar** and M. Ajmal Khan. 2017. Growth responses of *Phragmites karka* – a candidate for second generation biofuel from degraded saline lands, EGU2017-4375.
9. Aysa Rasheed, Abdul Hameed, **Salman Gulzar**, Bilquees Gul and M. Ajmal Khan. 2016. Phytosociological attributes and diversity of some halophytic communities of southern Pakistan. In Proceedings of "14th National and 5th International Conference of Botany, January 15-18, 2016", University of Karachi. Pp. 228.
10. Mohammad Moinuddin, Zainul Abideen, **Salman Gulzar** and M. Ajmal Khan. 2016. Physiological Studies Of The Halophyte *Sporobolus Tremulus*: A Potential Biofuel Crop For Saline Agriculture Systems. In Proceedings of "14th National and 5th International Conference of Botany, January 15-18, 2016", University of Karachi. Pp. 238.
11. Saman Ehsen, Zainul Abideen, R. Fatima Rizvi, Irfan Aziz, **Salman Gulzar**, Raziuddin Ansari, Bilquees Gul, and M. Ajmal Khan. 2016. Effect of NaCl salt on ecophysiological and anti-nutritive parameters of a xerohalophyte *Zaleya pentandra* (Linn.) C. Jeffrey. In Proceedings of "14th National and 5th International Conference of Botany, January 15-18, 2016", University of Karachi. Pp. 239
12. Shabana Afsar, Ayesha Rasheed, **Salman Gulzar** and M. Ajmal Khan. 2016. Effect of salinity on growth, water relations, and photosynthesis of *Salsola imbricata*. In Proceedings of "14th National and 5th International Conference of Botany, January 15-18, 2016", University of Karachi. Pp. 241.
13. Erum Shaukat, Zain-ul-Abideen, Irfan Aziz, **Salman Gulzar**, Muhammad Zaheer Ahmed and Bilquees Gul. 2016. Short and long term effects of NaCl on growth, physiological and biochemical responses of *Phragmites karka*. In Proceedings of "14th National and 5th International Conference of Botany, January 15-18, 2016", University of Karachi. Pp. 237.
14. Nadia Mushtaq, Sughra Aleem, **Salman Gulzar** and Jameel Kazmi. 2016. Identification of crops and orchards through Geoinformatic techniques. In Proceedings of "14th National and 5th International Conference of Botany, January 15-18, 2016", University of Karachi. Pp. 90.
15. Saman Ehsen, Rabab Fatima Rizvi, Zain-ul-Abideen, Irfan Aziz, **Salman Gulzar**, Raziuddin Ansari, Bilquees Gul and M. Ajmal Khan. Salinity induced changes in growth, water relations, gas exchange and antinutritive characteristics of *Haloxylon stocksii*. 4th International Conference on Environmental Horizon, Department of Chemistry, University of Karachi, Pp. 180., Jan. 8-10, 2016.
16. **Salman Gulzar**, M.Z. Ahmed and M.A. Khan. 2009. Comparison of ionic and osmotic effects of chloride and sulphate salts on seed germination of *Halogeton glomeratus* (Bieb.) C.A. Mey at various temperature and photoperiod regimes. In: "International Thematic Workshop on Recent Advances in Plant Abiotic Stress Tolerance". (October 9-11, 2009), Sponsored By COMSTECH, NIGAB/NARC and PARC/IABGR. Venue: COMSTECH Auditorium, Islamabad. P.25.
17. **Salman Gulzar** and M.A. Khan. 2006. Effects of salinity on *Aeluropus lagopoides*: A potential forage candidate. International conference on biosaline agriculture and high salinity tolerance and the First international symposium on sabkha management, 3-8 November, 2006. Gammarth, **Tunis**, Tunisia. Pp. 142.
18. **Salman Gulzar** and M.A. Khan. (2008). Effects of Salinity on *Sporobolus ioclados*: a Potential Forage Candidate. 2008. In: Proceedings of the 10th National Meeting of Plant Scientists, University of Agriculture, Faisalabad. (February 27-March 1, 2008).

19. **Salman Gulzar** and M.A. Khan. (2006). Seed germination of *Cyperus arenarius* from coastal sand dunes of Karachi. 9th National Meeting of Plant Scientists, University of Sindh, Jamshoro. Pp. 65.
20. **Salman Gulzar** and M.A. Khan. (2005). The role of thermoperiod on the recovery of seed germination in grasses from saline conditions. International Conference on "Biotechnology for Salinity and Drought Tolerance in Plants", **Islamabad** (28-31 March, 2005). Pp. 186.
21. **Salman Gulzar** and M.A. Khan. (2003). Comparative growth, water and ion relations of perennial halophytic grasses. 8th National Meeting of Plant Scientists, University of Karachi, **Karachi**, Pakistan, (February 24-28). Pp: 139.
22. M. Ajmal Khan and **Salman Gulzar**. (2000). Salt tolerance in the coastal grass *Urochondra setulosa*. Sustainable Utilization of halophytic cash crops. **Osnabrueck**, Germany, (May 27 - June 3). Pp: 24.
23. **Salman Gulzar** and M.A. Khan. (2000). Germination responses in a coastal grass *Urochondra setulosa*. 7th National Conference of Plant Scientists, University of the Punjab, **Lahore**, Pakistan, (November 14-16). Pp: 47.
24. M. Ajmal Khan and **S. Gulzar**. (1997). Plant water relations in halophytes from coastal and inland salt marshes of Pakistan. International conference on the biology of coastal environments, University of **Bahrain**, (April 6-9). Pp: 54.
25. **Salman Gulzar** and M.A. Khan. (1994). Diurnal osmoregulation in two halophytes from coastal and inland populations. International Symposium on High Salinity Tolerant Plants, University of Karachi, **Karachi**, Pakistan (Dec 13-17, 1994). Pp: 38.

MUHAMMAD HUZAIFA ZAFAR



About Me

Hi there my name is Muhammad Huzaifa Zafar. I am poultry farm manager with 4 year experience

Dedicated and experienced Poultry Farm

Manager with a strong background in poultry management, operations, and team leadership. Seeking a challenging position to apply my skills and expertise in optimizing poultry farm performance and profitability.



+92 3076442494



mianhuzaifa8087@gmail.com



Chak No. 113/10-r Tehsil Jahanina
District Khanewal

LANGUAGE

- English(fluent)
- Urdu(fluent)
- Punjabi(basic)

EXPERTISE

- Content writer
- Office management
- Microsoft office (MS word,Power Point ,Excel)
- Data entry operator
- Poultry farm management
- Team leadership and supervision
- Biosecurity protocols
- Nutrition and feeding programs
- Health assessment and disease management
- Environmental control systems
- Inventory management
- Data analysis and reporting
- Regulatory compliance

EXPERIENCE

As an Poultry Farm manager Broiler Farm Multan

- Managed day-to-day operations of a bird poultry farm, overseeing all aspects of poultry production, health, and welfare.
- Implemented and maintained biosecurity measures to ensure the health and safety of the flock.
- Supervised a team of employees, providing training and guidance to achieve farm goals and productivity targets.
- Conducted regular health assessments, vaccinations, and administered medication as necessary to maintain bird health.
- Developed and executed feeding programs, ensuring optimal nutrition for the flock.
- Monitored environmental conditions within poultry houses, including temperature, ventilation, and lighting.
- Managed inventory and procurement of feed, equipment, and supplies to maintain efficient farm operations.
- Implemented cost-effective measures to maximize farm profitability while minimizing expenses.
- Maintained detailed records of production, expenses, and inventory for reporting and analysis.
- Ensured compliance with all relevant regulations and standards in the poultry industry.

EDUCATION

Education
MSC hons Poultry Science
2020-2023
Bsc hons Poultry Science
2016-2020
FSC pre medical
2014-2016
Muslim Group of colleges Multan
Matriculation
2012-2014
The Laural Science High school

WORK EXPERIENCE SUMMARY

Experience
Job At Faisal Feed Broiler Farm
August 2020- July 2021
Internahip At Faisal Feed Broiler Farm
January 2020- May 2020
Pre Internahip
At Faisal Feeds Broiler Farm
2018

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Zulfiqar Ahmed

Year: 2022 - Course No: PSC-302

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	56.67%	36.67%	6.67%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	46.67%	30.00%	16.67%	6.67%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	20.00%	53.33%	23.33%	3.33%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	26.67%	43.33%	23.33%	6.67%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	30.00%	50.00%	20.00%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	40.00%	33.33%	20.00%	3.33%	3.33%	0.00%	100%
7	The teacher has covered the course.	33.33%	26.67%	16.67%	20.00%	0.00%	3.33%	100%
8	The teacher is fair in evaluation.	36.67%	36.67%	13.33%	13.33%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	46.67%	36.67%	10.00%	0.00%	6.67%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	30.00%	26.67%	30.00%	10.00%	0.00%	3.33%	100%
11	The teacher follows moral and ethical norms with the students.	33.33%	26.67%	33.33%	3.33%	3.33%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	33.33%	43.33%	13.33%	10.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	26.67%	36.67%	20.00%	16.67%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	26.67%	43.33%	20.00%	10.00%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	46.67%	26.67%	20.00%	6.67%	0.00%	0.00%	100%
16	The course material is updated	23.33%	43.33%	23.33%	10.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	26.67%	26.67%	33.33%	10.00%	3.33%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	26.67%	43.33%	16.67%	13.33%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Syed Mudassir Gilani

Year: 2022 - Course No: PSC-304

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	54.76%	30.95%	7.14%	2.38%	4.76%	0.00%	100%
2	The teacher is punctual in the class.	33.33%	40.48%	19.05%	4.76%	2.38%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	30.95%	40.48%	21.43%	4.76%	2.38%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	28.57%	45.24%	21.43%	4.76%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	35.71%	40.48%	14.29%	9.52%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	35.71%	35.71%	26.19%	2.38%	0.00%	0.00%	100%
7	The teacher has covered the course.	33.33%	26.19%	35.71%	4.76%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	17.86%	39.29%	21.43%	14.29%	3.57%	3.57%	100%
9	The teacher submits the result within the specified time period.	42.86%	25.00%	21.43%	3.57%	7.14%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	21.43%	35.71%	32.14%	3.57%	3.57%	3.57%	100%
11	The teacher follows moral and ethical norms with the students.	39.29%	25.00%	21.43%	10.71%	3.57%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	50.00%	28.57%	7.14%	7.14%	7.14%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	25.00%	50.00%	17.86%	3.57%	3.57%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	39.29%	25.00%	25.00%	7.14%	3.57%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	32.14%	35.71%	21.43%	7.14%	3.57%	0.00%	100%
16	The course material is updated	25.00%	35.71%	32.14%	7.14%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	21.43%	28.57%	17.86%	3.57%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	35.71%	32.14%	17.86%	3.57%	10.71%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Taseer Ahmed Khan

Year: 2022 - Course No: PSC-306

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	80.00%	13.33%	6.67%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	46.67%	36.67%	13.33%	3.33%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	33.33%	56.67%	6.67%	3.33%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	23.33%	66.67%	10.00%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	62.07%	24.14%	13.79%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	41.38%	37.93%	20.69%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	34.48%	37.93%	24.14%	3.45%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	46.67%	23.33%	23.33%	6.67%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	43.33%	40.00%	13.33%	3.33%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	50.00%	30.00%	13.33%	6.67%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	63.33%	30.00%	3.33%	3.33%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	76.67%	16.67%	3.33%	3.33%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	36.67%	46.67%	13.33%	3.33%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	46.67%	33.33%	16.67%	3.33%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	30.00%	36.67%	30.00%	3.33%	0.00%	0.00%	100%
16	The course material is updated	26.67%	60.00%	10.00%	3.33%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	36.67%	40.00%	23.33%	0.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	36.67%	43.33%	13.33%	6.67%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. M. Noman Syed

Year: 2022 - Course No: PSC-308

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	43.33%	13.33%	23.33%	16.67%	3.33%	0.00%	100%
2	The teacher is punctual in the class.	10.00%	33.33%	23.33%	26.67%	6.67%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	13.33%	26.67%	40.00%	16.67%	3.33%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	6.67%	23.33%	43.33%	20.00%	6.67%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	6.90%	10.34%	37.93%	24.14%	20.69%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	3.45%	6.90%	31.03%	44.83%	13.79%	0.00%	100%
7	The teacher has covered the course.	6.90%	10.34%	34.48%	34.48%	13.79%	0.00%	100%
8	The teacher is fair in evaluation.	10.00%	10.00%	23.33%	33.33%	23.33%	0.00%	100%
9	The teacher submits the result within the specified time period.	6.67%	13.33%	26.67%	23.33%	30.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	10.00%	3.33%	26.67%	50.00%	10.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	10.00%	23.33%	36.67%	20.00%	10.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	26.67%	13.33%	36.67%	16.67%	6.67%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	6.67%	20.00%	33.33%	36.67%	3.33%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	13.33%	20.00%	33.33%	26.67%	6.67%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	6.67%	16.67%	43.33%	23.33%	10.00%	0.00%	100%
16	The course material is updated	10.00%	23.33%	26.67%	33.33%	6.67%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	6.67%	16.67%	33.33%	26.67%	16.67%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	6.90%	24.14%	34.48%	31.03%	3.45%	0.00%	100%

**Teacher's and Course Evaluation Survey
Department of Physiology**

Name of Degree programme: BS

Name of Teacher: Dr. Taseer Ahmed Khan

Year: 2023 - Course No: PSC-301

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	42.86%	28.57%	14.29%	14.29%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	14.29%	28.57%	28.57%	28.57%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	14.29%	28.57%	28.57%	28.57%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	0.00%	28.57%	57.14%	14.29%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	42.86%	42.86%	0.00%	14.29%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	14.29%	0.00%	57.14%	28.57%	0.00%	0.00%	100%
7	The teacher has covered the course.	14.29%	42.86%	42.86%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	0.00%	57.14%	42.86%	0.00%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	28.57%	71.43%	0.00%	0.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	14.29%	57.14%	14.29%	14.29%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	14.29%	57.14%	28.57%	0.00%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	14.29%	28.57%	42.86%	14.29%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	71.43%	14.29%	14.29%	0.00%	0.00%	100%
16	The course material is updated	28.57%	14.29%	0.00%	57.14%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	57.14%	0.00%	14.29%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	28.57%	28.57%	28.57%	14.29%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Zulfiqar Ahmed

Year: 2023 - Course No: PSC-303

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	28.57%	14.29%	42.86%	14.29%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	28.57%	42.86%	14.29%	14.29%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	28.57%	42.86%	14.29%	14.29%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	0.00%	57.14%	28.57%	14.29%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	28.57%	14.29%	57.14%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	0.00%	85.71%	14.29%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	0.00%	14.29%	85.71%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	0.00%	28.57%	42.86%	28.57%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	14.29%	14.29%	57.14%	14.29%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	14.29%	14.29%	42.86%	28.57%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	0.00%	42.86%	57.14%	0.00%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
16	The course material is updated	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	14.29%	42.86%	28.57%	14.29%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	28.57%	14.29%	28.57%	28.57%	0.00%	0.00%	100%

**Teacher's and Course Evaluation Survey
Department of Physiology**

Name of Degree programme: BS

Name of Teacher: Dr. Syed Mudassir Gilani

Year: 2023 - Course No: PSC-305

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	28.57%	28.57%	28.57%	14.29%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	28.57%	42.86%	14.29%	14.29%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	14.29%	28.57%	42.86%	14.29%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	0.00%	57.14%	28.57%	14.29%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	14.29%	0.00%	42.86%	14.29%	28.57%	0.00%	100%
7	The teacher has covered the course.	14.29%	42.86%	42.86%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	14.29%	42.86%	28.57%	14.29%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	28.57%	57.14%	0.00%	14.29%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	14.29%	42.86%	14.29%	28.57%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	0.00%	57.14%	28.57%	14.29%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	0.00%	28.57%	57.14%	14.29%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	57.14%	28.57%	14.29%	0.00%	0.00%	100%
16	The course material is updated	28.57%	14.29%	0.00%	57.14%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	57.14%	0.00%	14.29%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	28.57%	28.57%	28.57%	14.29%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey
Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Aribah Naz

Year: 2023 - Course No: PSC-307

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	14.29%	14.29%	57.14%	14.29%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	14.29%	57.14%	28.57%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	28.57%	0.00%	57.14%	14.29%	0.00%	0.00%	100%
7	The teacher has covered the course.	14.29%	42.86%	28.57%	14.29%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	14.29%	28.57%	57.14%	0.00%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	14.29%	57.14%	28.57%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	14.29%	57.14%	14.29%	14.29%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	14.29%	57.14%	28.57%	0.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	0.00%	42.86%	57.14%	0.00%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	0.00%	14.29%	71.43%	14.29%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	71.43%	14.29%	14.29%	0.00%	0.00%	100%
16	The course material is updated	28.57%	14.29%	0.00%	57.14%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	57.14%	0.00%	14.29%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	28.57%	28.57%	28.57%	14.29%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Zulfiqar Ahmed

Year: 2023 - Course No: PSC-302

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	28.57%	71.43%	0.00%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	0.00%	85.71%	14.29%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	57.14%	28.57%	14.29%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	28.57%	42.86%	14.29%	14.29%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	14.29%	71.43%	14.29%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	57.14%	14.29%	14.29%	14.29%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	42.86%	28.57%	14.29%	14.29%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	28.57%	42.86%	14.29%	14.29%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
16	The course material is updated	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	28.57%	42.86%	0.00%	28.57%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Mudassir Hussain Gilani

Year: 2023 - Course No: PSC-304

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	28.57%	57.14%	14.29%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	14.29%	57.14%	28.57%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	57.14%	14.29%	28.57%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	28.57%	71.43%	0.00%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	28.57%	57.14%	14.29%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	42.86%	57.14%	0.00%	0.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	71.43%	14.29%	14.29%	0.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	28.57%	57.14%	14.29%	0.00%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
16	The course material is updated	57.14%	42.86%	0.00%	0.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	57.14%	14.29%	0.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	42.86%	42.86%	0.00%	14.29%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Taseer Ahmed Khan

Year: 2023 - Course No: PSC-306

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	71.43%	14.29%	14.29%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	57.14%	28.57%	14.29%	0.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	28.57%	57.14%	14.29%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	0.00%	85.71%	14.29%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	57.14%	14.29%	28.57%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	42.86%	14.29%	42.86%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	28.57%	28.57%	28.57%	14.29%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	14.29%	42.86%	42.86%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	71.43%	14.29%	14.29%	0.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	71.43%	14.29%	0.00%	14.29%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	42.86%	28.57%	14.29%	14.29%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	28.57%	42.86%	14.29%	14.29%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
16	The course material is updated	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	28.57%	42.86%	0.00%	28.57%	0.00%	0.00%	100%



Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. M. Noman Syed

Year: 2023 - Course No: PSC-308

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	42.86%	28.57%	28.57%	0.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	28.57%	57.14%	14.29%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	14.29%	57.14%	28.57%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	42.86%	42.86%	14.29%	0.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	57.14%	14.29%	28.57%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	28.57%	71.43%	0.00%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	14.29%	28.57%	42.86%	14.29%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	14.29%	42.86%	42.86%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	0.00%	57.14%	28.57%	14.29%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	28.57%	14.29%	57.14%	0.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	14.29%	28.57%	42.86%	14.29%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	14.29%	42.86%	42.86%	0.00%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	0.00%	42.86%	42.86%	14.29%	0.00%	0.00%	100%
16	The course material is updated	28.57%	42.86%	28.57%	0.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	28.57%	28.57%	42.86%	0.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	28.57%	28.57%	28.57%	14.29%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Mr. Kamran Nazir

Year: 2023 - Course No: PSC-401

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	50.00%	36.67%	13.33%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	33.33%	43.33%	20.00%	3.33%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	50.00%	46.67%	3.33%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	40.00%	53.33%	6.67%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	36.67%	43.33%	16.67%	3.33%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	20.00%	63.33%	13.33%	3.33%	0.00%	0.00%	100%
7	The teacher has covered the course.	26.67%	16.67%	33.33%	16.67%	6.67%	0.00%	100%
8	The teacher is fair in evaluation.	20.00%	56.67%	10.00%	10.00%	3.33%	0.00%	100%
9	The teacher submits the result within the specified time period.	50.00%	40.00%	10.00%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	53.33%	46.67%	0.00%	0.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	30.00%	53.33%	10.00%	6.67%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	53.33%	26.67%	16.67%	3.33%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	20.00%	73.33%	6.67%	0.00%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	73.33%	23.33%	0.00%	3.33%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	23.33%	66.67%	10.00%	0.00%	0.00%	0.00%	100%
16	The course material is updated	13.33%	80.00%	0.00%	6.67%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	13.33%	76.67%	10.00%	0.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	30.00%	63.33%	6.67%	0.00%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Zulfiqar Ahmed

Year: 2023 - Course No: PSC-403

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	50.00%	36.67%	13.33%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	33.33%	43.33%	20.00%	3.33%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	26.67%	50.00%	13.33%	6.67%	3.33%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	26.67%	53.33%	20.00%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	36.67%	43.33%	16.67%	3.33%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	6.67%	63.33%	23.33%	6.67%	0.00%	0.00%	100%
7	The teacher has covered the course.	23.33%	16.67%	33.33%	16.67%	10.00%	0.00%	100%
8	The teacher is fair in evaluation.	20.00%	56.67%	10.00%	10.00%	3.33%	0.00%	100%
9	The teacher submits the result within the specified time period.	46.67%	23.33%	16.67%	10.00%	3.33%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	50.00%	40.00%	0.00%	10.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	30.00%	50.00%	10.00%	10.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	53.33%	26.67%	16.67%	3.33%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	13.33%	66.67%	13.33%	6.67%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	50.00%	26.67%	13.33%	10.00%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	6.67%	56.67%	26.67%	10.00%	0.00%	0.00%	100%
16	The course material is updated	10.00%	80.00%	0.00%	10.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	13.33%	70.00%	16.67%	0.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	20.00%	63.33%	10.00%	6.67%	0.00%	0.00%	100%




**Teacher's and Course Evaluation Survey
Department of Physiology**

Name of Degree programme: BS

Name of Teacher: Mr. Kamran Nazir

Year: 2023 - Course No: PSC-405

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	43.33%	30.00%	26.67%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	20.00%	26.67%	50.00%	3.33%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	6.67%	33.33%	30.00%	26.67%	3.33%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	20.00%	33.33%	30.00%	16.67%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	36.67%	43.33%	16.67%	3.33%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	16.67%	26.67%	40.00%	16.67%	0.00%	0.00%	100%
7	The teacher has covered the course.	13.33%	36.67%	43.33%	6.67%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	23.33%	33.33%	30.00%	10.00%	3.33%	0.00%	100%
9	The teacher submits the result within the specified time period.	23.33%	26.67%	40.00%	10.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	16.67%	33.33%	26.67%	20.00%	3.33%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	20.00%	33.33%	23.33%	16.67%	6.67%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	23.33%	36.67%	26.67%	10.00%	3.33%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	6.67%	26.67%	36.67%	30.00%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	13.33%	46.67%	33.33%	6.67%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	3.33%	50.00%	36.67%	10.00%	0.00%	0.00%	100%
16	The course material is updated	31.03%	20.69%	34.48%	10.34%	3.45%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	6.67%	36.67%	20.00%	23.33%	13.33%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	13.33%	33.33%	30.00%	23.33%	0.00%	0.00%	100%



Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Mudassir Gilani

Year: 2023 - Course No: PSC-407

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	13.33%	53.33%	26.67%	6.67%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	13.33%	43.33%	33.33%	10.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	26.67%	40.00%	26.67%	6.67%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	20.00%	53.33%	26.67%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	16.67%	46.67%	26.67%	10.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	33.33%	53.33%	13.33%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	10.00%	56.67%	23.33%	6.67%	3.33%	0.00%	100%
8	The teacher is fair in evaluation.	33.33%	33.33%	30.00%	3.33%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	20.00%	53.33%	16.67%	3.33%	6.67%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	16.67%	26.67%	43.33%	13.33%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	30.00%	36.67%	30.00%	3.33%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	36.67%	53.33%	10.00%	0.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	16.67%	46.67%	36.67%	0.00%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	16.67%	30.00%	36.67%	13.33%	3.33%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	10.00%	46.67%	36.67%	6.67%	0.00%	0.00%	100%
16	The course material is updated	26.67%	26.67%	26.67%	20.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	16.67%	33.33%	30.00%	20.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	6.67%	23.33%	40.00%	26.67%	3.33%	0.00%	100%



Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Aribah Naz

Year: 2023 - Course No: PSC-409

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	43.33%	43.33%	13.33%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	26.67%	56.67%	13.33%	3.33%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	23.33%	56.67%	16.67%	3.33%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	20.00%	50.00%	30.00%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	36.67%	43.33%	10.00%	10.00%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	6.67%	63.33%	23.33%	6.67%	0.00%	0.00%	100%
7	The teacher has covered the course.	23.33%	16.67%	33.33%	16.67%	10.00%	0.00%	100%
8	The teacher is fair in evaluation.	20.00%	56.67%	6.67%	13.33%	3.33%	0.00%	100%
9	The teacher submits the result within the specified time period.	20.00%	36.67%	23.33%	16.67%	3.33%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	30.00%	50.00%	0.00%	20.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	26.67%	56.67%	6.67%	10.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	50.00%	30.00%	16.67%	3.33%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	13.33%	56.67%	13.33%	16.67%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	40.00%	36.67%	6.67%	16.67%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	10.00%	46.67%	26.67%	13.33%	3.33%	0.00%	100%
16	The course material is updated	10.00%	66.67%	3.33%	16.67%	3.33%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	20.00%	50.00%	23.33%	6.67%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	20.00%	63.33%	10.00%	6.67%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Sohail & Dr. Yasir

Year: 2023 - Course No: PSC-411

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	43.33%	33.33%	23.33%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	26.67%	43.33%	20.00%	10.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	23.33%	40.00%	26.67%	10.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	20.00%	40.00%	30.00%	10.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	26.67%	33.33%	23.33%	16.67%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	6.67%	40.00%	23.33%	26.67%	3.33%	0.00%	100%
7	The teacher has covered the course.	20.00%	16.67%	33.33%	20.00%	10.00%	0.00%	100%
8	The teacher is fair in evaluation.	23.33%	30.00%	10.00%	30.00%	6.67%	0.00%	100%
9	The teacher submits the result within the specified time period.	20.00%	36.67%	23.33%	16.67%	3.33%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	30.00%	26.67%	13.33%	30.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	23.33%	43.33%	20.00%	13.33%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	40.00%	36.67%	23.33%	0.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	13.33%	53.33%	16.67%	16.67%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	26.67%	20.00%	26.67%	26.67%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	10.00%	46.67%	26.67%	13.33%	3.33%	0.00%	100%
16	The course material is updated	10.00%	66.67%	3.33%	16.67%	3.33%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	20.00%	50.00%	23.33%	6.67%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	13.33%	40.00%	23.33%	23.33%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Mr. Kamran Nazir

Year: 2023 - Course No: PSC-402

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	60.00%	26.67%	13.33%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	56.67%	26.67%	16.67%	0.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	43.33%	46.67%	10.00%	0.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	46.67%	23.33%	30.00%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	33.33%	43.33%	16.67%	6.67%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	33.33%	53.33%	13.33%	0.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	30.00%	56.67%	13.33%	0.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	23.33%	33.33%	36.67%	6.67%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	16.67%	56.67%	26.67%	0.00%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	40.00%	43.33%	16.67%	0.00%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	26.67%	40.00%	30.00%	3.33%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	23.33%	23.33%	33.33%	20.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	16.67%	46.67%	36.67%	0.00%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	20.00%	40.00%	26.67%	13.33%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	30.00%	63.33%	6.67%	0.00%	0.00%	0.00%	100%
16	The course material is updated	26.67%	26.67%	26.67%	20.00%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	16.67%	33.33%	30.00%	20.00%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	6.67%	23.33%	40.00%	26.67%	3.33%	0.00%	100%




Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Zulfiqar Ahmed

Year: 2023 - Course No: PSC-404

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	43.33%	33.33%	16.67%	6.67%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	36.67%	23.33%	33.33%	6.67%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	20.00%	40.00%	30.00%	6.67%	3.33%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	13.33%	30.00%	26.67%	30.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	16.67%	43.33%	33.33%	6.67%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	26.67%	30.00%	26.67%	16.67%	0.00%	0.00%	100%
7	The teacher has covered the course.	13.33%	36.67%	30.00%	20.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	10.00%	26.67%	43.33%	20.00%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	23.33%	36.67%	26.67%	13.33%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	13.33%	33.33%	30.00%	23.33%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	30.00%	26.67%	36.67%	6.67%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	20.00%	23.33%	33.33%	23.33%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	13.33%	43.33%	30.00%	13.33%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	10.00%	26.67%	36.67%	23.33%	3.33%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	16.67%	33.33%	26.67%	23.33%	0.00%	0.00%	100%
16	The course material is updated	35.71%	10.71%	25.00%	25.00%	3.57%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	23.33%	30.00%	30.00%	13.33%	3.33%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	46.67%	23.33%	26.67%	3.33%	0.00%	0.00%	100%



Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Mudassir Hussain Gilani

Year: 2023 - Course No: PSC-406

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	36.67%	20.00%	23.33%	20.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	23.33%	30.00%	26.67%	20.00%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	16.67%	40.00%	23.33%	20.00%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	16.67%	26.67%	40.00%	13.33%	3.33%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	16.67%	26.67%	26.67%	20.00%	10.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	16.67%	20.00%	23.33%	30.00%	10.00%	0.00%	100%
7	The teacher has covered the course.	13.33%	10.00%	36.67%	26.67%	13.33%	0.00%	100%
8	The teacher is fair in evaluation.	16.67%	30.00%	10.00%	33.33%	10.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	20.00%	16.67%	36.67%	16.67%	10.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	26.67%	16.67%	10.00%	40.00%	6.67%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	27.59%	31.03%	20.69%	17.24%	3.45%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	40.00%	16.67%	23.33%	20.00%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	10.00%	56.67%	16.67%	16.67%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	26.67%	20.00%	26.67%	26.67%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	10.00%	46.67%	26.67%	13.33%	3.33%	0.00%	100%
16	The course material is updated	10.00%	66.67%	3.33%	16.67%	3.33%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	20.00%	23.33%	30.00%	23.33%	3.33%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	13.33%	40.00%	23.33%	23.33%	0.00%	0.00%	100%

**Teacher's and Course Evaluation Survey
Department of Physiology**

Name of Degree programme: BS

Name of Teacher: Dr. Mufzala

Year: 2023 - Course No: PSC-408

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	53.33%	23.33%	23.33%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	30.00%	46.67%	20.00%	3.33%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	33.33%	50.00%	13.33%	3.33%	0.00%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	30.00%	40.00%	30.00%	0.00%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	26.67%	33.33%	33.33%	3.33%	0.00%	3.33%	100%
6	The teacher creates an interactive environment for class discussion.	26.67%	30.00%	33.33%	10.00%	0.00%	0.00%	100%
7	The teacher has covered the course.	20.00%	43.33%	26.67%	10.00%	0.00%	0.00%	100%
8	The teacher is fair in evaluation.	23.33%	50.00%	23.33%	3.33%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	43.33%	30.00%	23.33%	3.33%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	30.00%	53.33%	13.33%	3.33%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	33.33%	20.00%	43.33%	3.33%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	16.67%	40.00%	30.00%	10.00%	0.00%	3.33%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	20.00%	46.67%	26.67%	3.33%	0.00%	3.33%	100%
14	The course integrates theoretical course concepts with real-world applications	20.00%	33.33%	36.67%	10.00%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	16.67%	46.67%	10.00%	26.67%	0.00%	0.00%	100%
16	The course material is updated	35.71%	10.71%	25.00%	25.00%	3.57%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	23.33%	30.00%	30.00%	13.33%	3.33%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	46.67%	23.33%	26.67%	3.33%	0.00%	0.00%	100%

Teacher's and Course Evaluation Survey

Department of Physiology

Name of Degree programme: BS

Name of Teacher: Dr. Salman Gulzar

Year: 2023 - Course No: PSC-410

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	53.57%	28.57%	14.29%	3.57%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	32.14%	25.00%	28.57%	14.29%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	10.71%	39.29%	25.00%	21.43%	3.57%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	7.14%	39.29%	25.00%	28.57%	0.00%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	17.86%	32.14%	35.71%	14.29%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	28.57%	46.43%	17.86%	3.57%	0.00%	3.57%	100%
7	The teacher has covered the course.	17.86%	42.86%	25.00%	10.71%	3.57%	0.00%	100%
8	The teacher is fair in evaluation.	17.86%	39.29%	28.57%	10.71%	3.57%	0.00%	100%
9	The teacher submits the result within the specified time period.	21.43%	21.43%	25.00%	28.57%	3.57%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	25.00%	28.57%	28.57%	17.86%	0.00%	0.00%	100%
11	The teacher follows moral and ethical norms with the students.	25.00%	39.29%	25.00%	10.71%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	7.14%	46.43%	25.00%	17.86%	3.57%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	7.14%	46.43%	21.43%	21.43%	0.00%	3.57%	100%
14	The course integrates theoretical course concepts with real-world applications	7.14%	32.14%	25.00%	32.14%	3.57%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	21.43%	35.71%	32.14%	10.71%	0.00%	0.00%	100%
16	The course material is updated	25.00%	28.57%	25.00%	21.43%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	21.43%	42.86%	25.00%	10.71%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	25.00%	39.29%	17.86%	14.29%	3.57%	0.00%	100%



**Teacher's and Course Evaluation Survey
Department of Physiology**

Name of Degree programme: BS

Name of Teacher: Dr. Taseer Ahmed Khan

Year: 2023 - Course No: PSC-412

S. NO.	Teacher's Evaluation	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Unanswered	Total
1	The teacher provides lesson plan in the first week of the semester.	53.57%	39.29%	7.14%	0.00%	0.00%	0.00%	100%
2	The teacher is punctual in the class.	28.57%	46.43%	17.86%	7.14%	0.00%	0.00%	100%
3	The teacher comes prepared for each lecture/ practical (where applicable)	35.71%	25.00%	25.00%	10.71%	3.57%	0.00%	100%
4	The teacher demonstrates and communicate knowledge of the subject in easy language.	14.29%	42.86%	21.43%	14.29%	7.14%	0.00%	100%
5	The teacher suggests additional reading material apart from the text book.	21.43%	53.57%	17.86%	7.14%	0.00%	0.00%	100%
6	The teacher creates an interactive environment for class discussion.	28.57%	46.43%	17.86%	7.14%	0.00%	0.00%	100%
7	The teacher has covered the course.	32.14%	32.14%	28.57%	3.57%	0.00%	3.57%	100%
8	The teacher is fair in evaluation.	32.14%	39.29%	14.29%	14.29%	0.00%	0.00%	100%
9	The teacher submits the result within the specified time period.	46.43%	28.57%	17.86%	7.14%	0.00%	0.00%	100%
10	The teacher remains available for consultation during the specified office hours	28.57%	28.57%	32.14%	7.14%	0.00%	3.57%	100%
11	The teacher follows moral and ethical norms with the students.	25.00%	35.71%	14.29%	25.00%	0.00%	0.00%	100%
	Course Evaluation:							
12	The course is well organized.	21.43%	39.29%	32.14%	7.14%	0.00%	0.00%	100%
13	The syllabus clearly states course objectives requirements, procedures and grading criteria	21.43%	39.29%	32.14%	7.14%	0.00%	0.00%	100%
14	The course integrates theoretical course concepts with real-world applications	28.57%	32.14%	25.00%	14.29%	0.00%	0.00%	100%
15	The assignments and exams covered the materials presented in the course	32.14%	25.00%	17.86%	25.00%	0.00%	0.00%	100%
16	The course material is updated	25.00%	28.57%	25.00%	21.43%	0.00%	0.00%	100%
17	The contents presented in the course has increased my knowledge of the subject.	21.43%	42.86%	25.00%	10.71%	0.00%	0.00%	100%
18	The course content has stimulated my intellectual curiosity.	25.00%	39.29%	17.86%	14.29%	3.57%	0.00%	100%