

QURAT-UL-AIN AHMAD

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| Date of birth | 07-15-1984 |
| Nationality | Pakistani |
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| Email | quratulainahmad2011@gmail.com, quratulain.ahmad@ue.edu.pk |
| Marital Status | Married |
| Official Address | Assistant Professor, Department of Zoology, Division of Science & Technology, University of Education, Lahore, Pakistan |

EMPLOYMENT HISTORY

- Assistant professor (TTS) in Department of Zoology, Division of Science and Technology, University of Education, Lahore (September 28, 2018- To-date)
- Assistant professor (on contract) in Department of zoology, University of the Punjab (July 03, 2017- June 30, 2018).
- Visiting Lecturer in Institute of Biochemistry and Biotechnology, University of the Punjab (Sep, 2016-To June 2018).
- Worked as Research Officer in an International Project “Plant Biomass” in School of Biological Sciences, University of the Punjab, Lahore (Sep 01 – Dec 30, 2016).

EDUCATIONAL HISTORY

DOCTORAL RESEARCH (2011-16)

- PhD from Department of Zoology, University of the Punjab
- Visiting scholar at The Ohio State University, USA (April– September 2015)

Dissertation Title:

“TOWARDS SECOND GENERATION NON-ASEPTIC ETHANOL AND HYDROGEN FERMENTATIONS EMPLOYING EXTREMOPHILES”

Under the Supervision of Professor Dr. Javed Iqbal Qazi from Department of Zoology, University of the Punjab and Professor Dr. Shang-Tian Yang from Department of Chemical and Biomolecular Engineering, Ohio state University, Columbus, Ohio, USA.

M.S. / M. PHIL ZOOLOGY (2007-09):

Dissertation Title:

“EXPRESSION OF TOXIN REGION PROTEIN GENE CRY4A FROM LOCAL ISOLATES OF BACILLUSTHURINGIENSIS”

Department of Zoology, University of the Punjab.

B.SC. (HONORS) ZOOLOGY (2003-2007):

Department of Zoology, University of the Punjab, Lahore

Percentage 85.31, CGPA: 3.94, 1st Division, **Second Position Overall**

Research & Project Report: Exploitation of Extremophilic (Thermophilic, Acidophilic, Alkaliphilic and Halophilic) Bacteria for Development for Biotechnologically Valuable Processes

Project Report: “POTENTIAL OF MYOCARDIAL STEM CELLS FOR HEART MUSCLE REGENERATION”

University of the Punjab, Lahore.

RESEARCH PUBLICATIONS

Top 20 publication detail is given below:

- Asma Chaudhary, Irshad Hussain, **Qurat ul Ain Ahmad**, Zawar Hussain, Afia Muhammad Akram, Ali Hussain, Efficient utilization of melon peels to produce ethanol: a step toward sustainable waste management. *Biomass Conversion and Biorefinery* <https://doi.org/10.1007/s13399-022-02687> (IF: 4.987)
- Asma Chaudhary, Ali Hussain, **Qurat ul Ain Ahmad**, Maleeha Manzoor, Syeda Anjum Tahira, Shuichi Karita. Statistical optimization of alkaline treatment of pomegranate peel waste for bioethanol production. *Biomass Conversion and Biorefinery* <https://doi.org/10.1007/s13399-022-02345-z> (IF: 4.987)
- Maleeha Manzoor, Ali Hussain, **Qurat-ul-Ain Ahmad**, Asma Chaudhary, Peer M. Schenk, Balakrishnan Deepanraj, Pau Loke Show. Biodiesel quality assessment of microalgae cultivated mixotrophically on sugarcane bagasse, *Sustainable Energy Technologies and Assessments*, Volume 53, Part A, October 2022, 102359 (IF: 5.353)
- Asma Chaudhary, Ali Hussain, **Qurat ul Ain Ahmad**, Tooba Ahmad, Qandeel Minahal, Shuichi Karita, Balakrishnan Deepanraj . Watermelon peel hydrolysate production optimization and ethanogenesis employing yeast isolates. *Biomass Conversion and Biorefinery* <https://doi.org/10.1007/s13399-022-02923-1> (IF: 4.987)
- Natasha Laraib, Ali Hussain, Arshad Javid, Tahir Noor, **Qurat ul Ain Ahmad**, Asma Chaudhary, Maleeha Manzoor, Muhammad Akmal, Syed Mohsin Bukhari, Waqas Ali, Tae Jin Choi, Peer M. Schenk. Recent trends in microalgal harvesting: an overview. Received: 2 May 2021 / Accepted: 1 September 2021. *Environment, Development and Sustainability* <https://doi.org/10.1007/s10668-021-01805-2> (IF: 3.219)
- Chaudharya , A. M. Akrama , **Qurat-ul-Ain Ahmad** , Z. Hussaina , S. Zahrab, Q. Minahala , S. Azharc , S. Ahmadd, S. Hayate , M. A. Javed, M. S. Haiderg , Q. Alie and S. Karitah. Optimized biotransformation of acid-treated water melon peel hydrolysate into ethanol. *Brazilian Journal of Biology*, 2023, vol. 83, e253009 | <https://doi.org/10.1590/1519-6984.253009> (IF: 1.32)
- Zahida, Raheela Akhtarb, **Qurat-ul-Ain Ahmad**, Q. Akrama , R. Yasmeen, M. K. Ateeqd, M. Razad, H. M. Rizwan , Z. Iqbal , M. M. Saleem , M. Imran. Clinico-pathological

assessment of virulent Newcastle Disease Virus in ducks. *Brazilian Journal of Biology* (IF: 1.32)

- Chaudhary, A., Akram, A. M., Aihatesham, A., Hussain, Z., Abbas, A. S., Rehman, R. A. **Qurat-ul-Ain Ahmad**, ... & Sayed, S. (2021). Punica granatum waste to ethanol valorisation employing optimized levels of saccharification and fermentation. *Saudi Journal of Biological Sciences* (IF: 2.802)
- Chaudhary, A., **Qurat-ul-Ain Ahmad**, A. M., Akram, M. I., & Qazi, J. I. (2021). Effect of *Sphingomonas* sp., as a Probiotic on Survival, Growth and Biochemical Constituents of *Vibrio anguillarum* Challenged *Labeo rohita* Fingerlings (IF: 0.790)
- Ishaq, A.R., Manzoor, M, Jawad Ahmad, **Qurat-ul-Ain Ahmad**, Jabeen, F.,, Younis, T., Noor, A. and Noor, F., 2020. Current status of microalgae to produce biogas through pretreatment of lignocellulosic waste in the era of 21-Century. Sukkar IBA University. Volume 3(2), 2020 (HEC y-category Journal)
- Saleem, A., Hussain, A., Chaudhary, **Qurat-ul-Ain Ahmad**, A., Iqtedar, M., Javid, A., & Akram, A. M. (2020). Acid hydrolysis optimization of pomegranate peels waste using response surface methodology for ethanol production. *Biomass Conversion and Biorefinery*, 1-12 (IF: 2.15)
- Chaudhary, A., **Qurat-ul-Ain Ahmad**, A. M., & Akram, S. Antagonistic Probioticity of Novel Bacterial Isolates from Pakistan against Fish Pathogen *Pseudomonas fluorescens* in *Labeo rohita* Fingerlings. *Pakistan J. Zool.*, pp 1-14, 2021 (IF: 0.790)
- Manzoor, M., Jabeen, F., **Qurat-ul-Ain Ahmad**, Younis, T., Eltanahy, E., & Schenk, P. M. (2021). Sugarcane bagasse hydrolysate as organic carbon substrate for mixotrophic cultivation of *Nannochloropsis* sp. BR2. *Waste and Biomass Valorization*, 12(5), 2321-2331 (IF: 2.851)
- Chaudhary, A., Akram, A. M., **Qurat-ul-Ain, Ahmad**. Minahal, Q., Ara, C., Andleeb, S., & Ali, Q. (2020). RSM-based fermentative ethanologeneses employing acid hydrolysate watermelon peels. *Plant cell biotechnology and molecular biology*, 63-77 (y-category)
- **Qurat-ul-Ain Ahmad**, M Manzoor, A Chaudhary, ST Yang, H Shim, JI Qazi Bench-scale fermentation for second generation ethanol and hydrogen production by *Clostridium thermocellum* DSMZ 1313 from sugarcane bagasse. 14 August 2020 *Environmental Progress & Sustainable Energy*, 40(2), e13516 (IF: 1.596)
- Maleeha Manzoor, **Qurat-ul-Ain Ahmad**, Ambreen Aslam, Faiza Jabeen, Azhar Rasul, Peer M. Schenk, Javed I. Qazi (2019). Mixotrophic cultivation of *Scenedesmus dimorphus* in sugarcane bagasse hydrolysate. *Environmental Progress & Sustainable Energy*. doi: <https://doi.org/10.1002/ep.13334> (IF: 1.596)
- Zahid, B., Qazi, J. I., Zohaib, A., Aslam, A., Akhter, R., Sadia, H., **Qurat-ul-Ain Ahmad**, & Alyas, S. (2020). Detection and Molecular Characterization of Virulent Newcastle Disease Virus in Ducks (*Anas platyrhynchos domesticus*). *Pakistan J. Zool*, 52(1), 1-4 (IF: 0.790)
- Tabssum Fouzia, **Qurat-ul-Ain Ahmad**, Javed Iqbal Qazi. DNA sequenced based bacterial taxonomy should entail decisive phenotypic remarks: Towards a balanced approach. *J Basic Microbiol*. 2018 Nov; 58(11):918-927. doi: 10.1002/jobm.201800319. Epub 2018 Aug 24 (IF: 2.281)
- **Qurat-ul-ain Ahmad**, Ph.D; Shang-Tian Yang; Maleeha Manzoor; Javed Iqbal Qazi. Moderate alkali-thermophilic ethanologeneses by locally isolated *Bacillus licheniformis* from Pakistan employing sugarcane bagasse: A comparative aspect of aseptic and non-

aseptic fermentations. *Biotechnology for Biofuels* 2017, 10:105 DOI: 10.1186/s13068-017-0785-1 (IF: 6.44)

- **Qurat-ul-Ain Ahmad** and Javed Iqbal Qazi. Thermophilic fermentations of lignocellulosic substrates and economics of biofuels: prospects in Pakistan. *Int J Energy Environ Eng* 2014, 5:1-14. DOI 10.1007/s40095-014-0094-4 (IF: 4.57)

BOOK CHAPTER BY INTERNATIONAL PUBLISHER

- Bao, Teng & Jiang, Wenyan, **Qurat-ul-Ain Ahmad** and Yang, Shang-Tian. (2022). Consolidated bioprocessing for ethanol and butanol production from lignocellulosic biomass: Recent advances in strain and process engineering. 10.1016/B978-0-12-819248-1.00009-9.

RESEARCH SUPERVISION

BS THESIS COMPLETED:

- BSZOOOL 17- UE-03539. Hammair Ullah. Variation in Covid-19 morbidity and fatality patterns across provinces of Pakistan. Descriptive Analysis.
- BSZOOOL 17-UE-03122. Morbidity and mortality from Covid-19 in Pakistan. trend Analysis.
- BSZOOOL-F15-M05, Mudassir Sabri s/o Qadir Bakhsh Session 2015-19 (Morning) Department of Zoology, Division of Science and Technology, UE, LHR. Isolation of mild Alkilophilic cellulolytic bacteria for enhanced saccharification of second generation biomass.
- BSZOOOL-F15-E34, Anila Jahangir d/o Jahangir Alam, Session 2015-19 (Evening) Department of Zoology, Division of Science and Technology, UE, LHR. Isolation of hemicellulose degrading thermophiles for efficient lignocellulosic biomass hydrolysis
- BSZOOOL-F15-E23, Muhammad Zubair Latif s/o Muhammad Latif, Session 2015-19 (Evening) Department of Zoology, Division of Science and Technology, UE, LHR. Isolation of thermophilic starch degrading bacteria for improved hydrolysis of potato (*Solanum tuberosum*) peels.
- BSZOOOL 16-UE-02065. Iqra Shaheen. Screening of Efficient Fructose Degrading Bacterial Ethanologens
- BSZOOOL 16-UE-02080. Mariam. Bioconversion of Fructose Based Fruit Waste into Ethanol.

MS THESIS COMPLETED (SUPERVISOR)

- 20-UE-01062, Nida Saleem D/O Muhammad Saleem, Session 2020-2022. Department of Zoology, Division of Science and Technology, UE, LHR. Antibacterial Nanoparticles from *Chirayita* (*Swertia* sp.) Against Some Local Poultry Pathogens
- 20-UE-00959, Farzeen Shafeeqe D/O Muhammad Shafique, Session 2020-2022. Antibacterial Nanoparticles from Indian rennet (*Withania* sp.) Against Some Local Poultry Pathogens

- 19-UE-00649, Anila Batool D/O Ayub Ahmad, Session 2019-2021, Department of Zoology, Division of Science and Technology, UE, LHR. Synergistic Antimicrobial Effects of *Costus sp.* and Silver Nanoparticles Against selected Locally Isolated Gram-positive and Gram-negative Bacterial Pathogens.
- 19-UE-00487, Jawiria Latif D/O Abdul Latif. Session 2019-2021, Department of Zoology, Division of Science and Technology, UE, LHR. Synergistic Antimicrobial Effects of *Cassia sp.* and Silver Nanoparticles Against selected Locally Isolated Gram-positive and Gram-negative Bacterial Pathogens.
- 18-UE-01249, Sidra Haider d/o Ghulam Haider, Session 2018-20 Department of Zoology, Division of Science and Technology, UE, LHR. Evaluation of Antimicrobial Potential of *Costus sp.* against Some Local Gram-positive and Gram-negative Clinical Bacteria in Lahore, Pakistan.
- 18-UE-01166, Ammara Batool d/o Muhammad Mansha, Session 2018-20, Department of Zoology, Division of Science and Technology, UE, LHR. Evaluation of Antimicrobial Potential of *Cassia sp.* Against Some Local Gram-positive and Gram-negative Clinical Bacteria in Lahore, Pakistan

MS THESIS CO-SUPERVISION COMPLETED

- 17-UE-02601, Qandeel Minahal d/o Babar Saleem, Session 2018-20. Response surface methodology based optimization of watermelon (*Citrullus lanatus*) hydrolysate fermentation from selected yeast isolates.

PHD THESIS CO-SUPERVISION IN PROGRESS

- 2014-VA-1049, Muhammad Muneeb s/o Abdul Aziz, Session 2018-onward . Bioremediation of Industrial Wastewater using dissimilatory sulfate reducing bacteria.

MS THESIS SUPERVISION IN PROGRESS

- 21-UE-02394, Arfa Intzar Butt d/o Intizar Hussain Butt, Session 2021-23. Department of Zoology, Division of Science and Technology, UE, LHR. Bioethanogenesis from Sugarcane Bagasse Using Zinc Oxide Nanoparticles.
- 21-UE-01723, Nosheen Kanwal d/o Ghulam Mursaleen, Session 2021-23. Department of Zoology, Division of Science and Technology, UE, LHR. Effect of Zinc Oxide Nanoparticles on Bioethanol Production Using Potato Peels

CONFERENCES/TRAININGS/WORKSHOPS/SYMOPIA ORGANIZED

- Worked as organizer in 1st One-Day Hands-on training on Animal Taxidermy on 13th Dec, 2022, University of Education, Township Lahore
- Worked as organizer in 4th One-Day International Symposium On World Fisheries Day on 25th Nov, 2022, University of Education, Township Lahore
- Worked as organizer in 1st International Conference in Zoological Emerging Scientific Trends (ZEST) at 18th January 2022, University of Education, Township Lahore

- Worked as organizer in 4 Days Virtual Training on Safe and Secure Sample Collection on Oct 28-31, 2021 at University of Education, Township Lahore.
- Worked as organizer in One-Day International Seminar on Covid-19 Immunization and implications on 3rd November 2021
- Worked as organizer in 5 days Virtual Training on Biorisk Management on 14-18th Dec, 2020 at University of Education, Township Lahore.
- Worked as organizer in AQUA IDEA WORKSHOP INTERNATIONAL 2021, on 20th Feb., 2021, at University of Education, Township Lahore
- Worked as organizer in 1 day International Symposium on World Fisheries day at 21st November 2020, University of Education, Township Lahore
- Worked as organizer in AQUA IDEA WORKSHOP INTERNATIONAL 2020 on 29th Feb., 2020 at University of Education, Township Lahore
- Worked as organizer in World Animal day on 4th October 2020, at University of Education, Township Lahore
- Worked as organizer in “The Zoologists: Students’ society of Department of Zoology”, on Thursday, Dec 12, 2019, Department of Zoology, Division of Science and Technology at University of Education hosted a motivational Inaugural ceremony of students’ society, on Thursday, Dec 12, 2019.
- Worked as one of the organizer for International seminar on Next generation sequencing-through Gene reader Platform (Presented by: Qiagen Singapur regional Team).
- Worked as one of the organizer in 38th Pakistan congress of Zoology (International) held under the auspices of Zoological Society of Pakistan at University of the Punjab, Lahore on Feb 27-March 1, 2018.
- Worked as one of the organizer in Annual Sports 2018 of Department of Zoology, University of the Punjab.

CONFERENCES/TRAININGS/WORKSHOPS/SYMOPIA PARTICIPATION

- Participated in Enhance One Health Capacity for Biorisk Management, by Association for Biorisk management In collaboration with health Security Partners, The National Academies of Sciences Engineering Medicine and Institute for Laboratory Animal Research, Oct 28-31, 2021.
- Gas Chromatography from 16th to 17th May, 2014, workshop at School of Physical sciences, University of the Punjab, Lahore
- High Performance Liquid Chromatography from 27th to 28th Feb, 2015, workshop at School of Physical sciences, University of the Punjab, Lahore.
- Quantitative data Analysis using SPSS on 20th Feb, 2016, workshop at Office of Research Innovation and Commercialization (ORIC), University of the Punjab, Lahore.
- Infectious Diseases, prevention and Control on 13th April, 2016, International symposium at Institute of Biochemistry and biotechnology, University of the Punjab, Lahore.
- Polymerase Chain Reaction (PCR) Technology, workshop on 2nd April, 2016 at School of Physical sciences, University of the Punjab.

SCHOLARSHIPS AND AWARDS

- Awarded Indigenous 5000 scholarships Phase II from Higher Education Commission, Pakistan for Ph.D since 2012.
- Awarded the six-months fellowship under International Research support initiative program of Higher Education Commission, Pakistan for Ph. D (from April-September 2015).
- Awarded merit scholarship due to distinction in BS (Hons), MS and PhD by University of the Punjab.

PROJECTS AWARDED

- Awarded Research Project entitled “Antibacterial Potential of Plant Extracts Against Poultry Pathogens Threatening Public Health and Development and Commercialization of Herbal Products” as Member on 14.04.2022. Now this research project is in progress
- Awarded NRPB research project 2017 (HEC/R&D/NRPB/2-17/7070) as Co-PI entitled” Pilot-scale production of bioethanol from microalgae” on 04.02.19. Now this research project is completed
- Awarded University of the Punjab Research project for fiscal year 2017-18 as Principal Investigator. Now this research project is completed

FOCAL PERSON FOR ESTABLISHING BIOSECURITY PROTOCOL & PRACTICES

- Working with Association of Biorisk Management (ABM) as Focal Person from Department of Zoology, Division of science & Technology, University of Education for Upgradation of Zoology Laboratory in terms of establishing Biosecurity protocols and Practices since 2019.

STUDENT’S SOCIETY THE “ZOOLOGIST” IN UNIVERSITY OF EDUCATION

- Advisor in “The Zoologists”: A Students’ society of Department of Zoology”. The society was established in Sep 20, 2020, for providing a platform to the students of Department of Zoology, for curricular and extra-curricular activities

MERIT-BASED INCREMENTS AWARDED DURING TTS IN UNIVERSITY OF EDUCATION

- Advisor in “The Zoologists”: A Students’ society of Department of Zoology”. The society was established in Sep 20, 2020, for providing a platform to the students of Department of Zoology, for curricular and extra-curricular activities

EXTERNAL EXAMINAR FOR AWARD OF BS/MSC/MS/PHD DEGREE

- Served as External Examiner for more than 20 BS/MSc/MS/PhD degree award in HEC Recognized Universities of Pakistan (letters to External Examiner attached)