

AGRO-PATHOLOGY BULLETIN

Department of Plant Pathology, University of the Punjab



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Message from Dean Faculty of Agricultural Sciences

Agricultural Sciences is a multidisciplinary applied science with a mission to confront critical problems related to food, life and the environment over the past, present and future. In order to fulfill the mission and realize an affluent society, the entire faculty continues to work hard for the advancement of Agricultural Sciences. I congratulate the Department of Plant Pathology on the start of M.Sc. (Hons.) Agriculture Plant Pathology Replica/Self-supporting and PhD Plant Pathology this year. This issue offers a glimpse into the hard work done to fulfill the Department's mission.

Thanks to the consistent support of the worthy Vice Chancellor, University of the Punjab, our faculty continues to fulfill its mission in teaching, research and extension education. I am honored and grateful to serve as Dean of this wonderful faculty. I wish you and your loved ones a safe, healthy and joyful holiday season and a new year full of hope. Be well.



Message from Chairperson Department of Plant Pathology

Warm greetings to all of you! I'm thrilled to share the latest newsletter, filled with stories that embody our faculty's resilience and convey a spirit of optimism. This little effort is to remain connected to the community of stakeholders and constituents of the Punjab University. This year remained quite prolific. The faculty continued to make waves internationally through conferences and producing important research articles and book publishing. We also tried to increase learning opportunities for students through workshops and seminars.

I look forward, with anticipation, to both the challenges and opportunities of the upcoming year. I am confident that we will meet these challenges and capitalize on all the opportunities that these challenges may bring to continue on the path of success. On behalf of the staff and the faculty of the Department of Plant Pathology, I send you all the best wishes for the New Year, and I wish you a healthy and prosperous 2024.

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DPP organized 2 day workshop on "spying bioactive molecules"



Department of Plant Pathology, University of the Punjab organized two day workshop on "spying bioactive molecules" on 11 - 12 July 2023. Sixty three students and faculty members from different universities and departments participated in the workshop.

On first day theoretical knowledge was given regarding the role of bioactive chemicals in plant sciences and agriculture. Also the working mechanisms and application of High Performance Liquid Chromatography HPLC and LC/GC-MS were discussed in detail. All sessions were conducted by Prof. Dr. Tehmina Anjum and Dr. Waheed Akram.



Departments / Universities Participated

Department of Plant Pathology PU
Department of Food Science PU
Center for Applied Molecular Biology PU
School of Biochemistry & Biotechnology PU
College of Earth & Environmental Sciences PU
Institute of Botany Punjab University
MNS University of Agriculture Multan
Govt. College University Lahore
Govt. College Women University Sialkot
Lahore College for Women University LHR
Agriculture Department Okara University
Bahauddin Zakariya University Multan
University of Agriculture Faisalabad
University of Central Punjab Lahore
Forman Christian College Lahore
Lahore Garrison University

On the second day, hands-on training was conducted. Participants practiced analysis of GC/LC-MS data with different softwares. They were taught the use of online database and NIST MS Search program to identify compounds. Conversion of data and databases in different formats was also practiced. Lastly, a session was done on Nuclear Magnetic Resonance Spectroscopy and its application in biological sciences.

Participants were provided with relevant resources. Each session was followed by interactive group discussions, question answer session. Participants were given certificates. Before leaving, all the participants filled feedback performas and appreciated the efforts of organizers to provide a platform for learning as well as creating scientific linkages.



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Department of Plant Pathology & Vital Green Private Limited signed MOU on 18th July 2023



Department of Plant Pathology; Faculty of Agricultural Sciences signed Memorandum of Understanding with Vital Green Private Limited on 18th of July 2023. Both parties are already collaborating in research and human resource sharing.

On behalf of VGreen, Mr. Ahmad Umair, Chief Executive Officer whereas from DPP Prof. Dr. Tehmina Anjum signed the MoU. Muhammad Shahid Saleem, GM Technical VGreen and Dr. Zill-e-Huma, Assistant Professor DPP signed the MOU as witnesses. The Parties agree and undertake to be in complete abidance of the applicable laws of Pakistan



The purpose of this MoU is to express the intent of both parties to collaborate for conducting research and development and provision of internship, apprenticeship and job opportunities for the students of the Department of Plant Pathology, Faculty of Agricultural Sciences, Punjab University, where both parties can work together to carry out their respective obligations as set out in this Agreement



Under this MoU joint R&D activities will be planned where Vgreen will identify opportunities for R&D and fund these activities to the extent on actual cost basis. The MoU bound DPP to provide technical solutions based on the knowledge and capability among their faculty. VGreen team also interacted with the faculty of DPP and discussed various research projects going on in the department.



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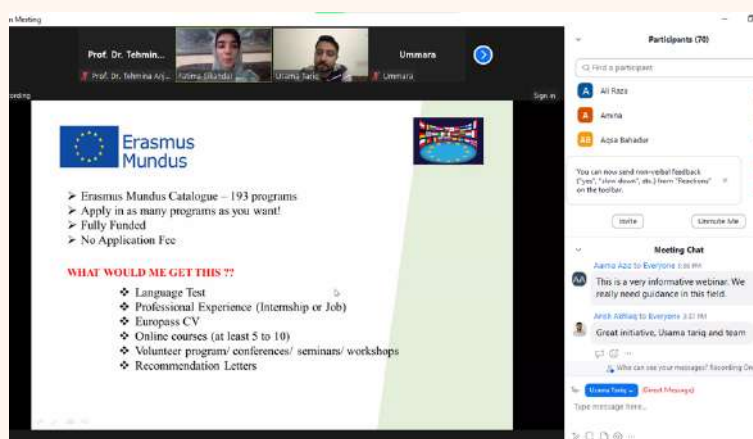
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Chairperson DPP spoke in a webinar on prospects of women in agriculture in academia



Chairperson Department of Plant Pathology was invited as speaker in a webinar organized by the Global Undergraduate Exchange Program in Pakistan on 22nd July 2023. The webinar was on "Uncovering Scholarships and Job Prospects for Women in Agriculture".

The objective of the webinar was to bridge the gender gap in the education sector and uncovering scholarships and job opportunities for women in the agriculture sector. Ms. Ummara Tariq Marketing Research Fauji Fertilizers talked on role of women in agriculture. Her talk was followed by Prof. Dr. Tehmina Anjum, Chairperson Department of Plant Pathology, Faculty of Agricultural Sciences, University of the Punjab. She spoke on "Prospects for women in agriculture in academia".



Dr. Anjum, highlighted various opportunities for women holding degrees in different majors of Agriculture. While giving examples of various graduates working in academia, private sector, NGOs and agriculture departments of the government of Pakistan. She said that the number of females who continue their education after bachelor's degree is also increasing, although it is still lower than males.

Dr. Anjum added that she sees this mainly as a social and cultural problem rather than an economic one as opportunities in the form of financial assistance and scholarships from various national and international sources are available. Hence, there is a need for strong advocacy campaigns both for female students and their families, so that we can break such stereotypes. She highlighted that higher education institutes should organize awareness about scholarship opportunities and training for writing good research proposals. Later, Mr. Usama Tariq and Ms. Fatima Sikandar, alumni Global UGRAD 2021 and Erasmus Mundus Fellow 2013 briefed the participants about various scholarship opportunities for agri-graduates. Participants were guided for application procedures. Questions and queries asked by the participants were also addressed.



Ms. Shakra said that writing a high-quality patent application is important because it sets out in a clear manner the terms by which the patent owner and others will be bound. In this sense, drafting a patent application is different from writing a scientific paper. She added that a good application can reduce time of processing. She also guided in detail about the legal requirements for patentability.



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Graduates of the Department of Plant Pathology won Chinese Govt. scholarship



Two of the fresh graduates of the Department of Plant Pathology, University of the Punjab, Mr. Hamza Rafiq (Left) and Mr. Faisal Shafiq Mirza (Right) secured admission in doctoral program at College of Plant Protection at Northwest Agriculture and Forestry University, Shanxi, China under fully funded Chinese Government Scholarship Program for 2023–27. The scholarship will include tuition, lodging, comprehensive medical insurance and living allowance. DPP has provided complete guidance for the scholarship process.

The Northwest Agriculture and Forestry University originated from National Northwest Junior College of Agriculture and Forestry founded in 1934, which is the earliest institution of higher agriculture and forestry education in northwest China. The College of Plant Protection was founded in 1934. Today they have established a national teaching team for plant pathology, and for entomology and pesticide in Shaanxi Province. They are at the international leading position in wheat stripe rust and Fusarium head blight, apple rot disease, wheat pulp, fruit trees budworm, half spectacle insect systemic development and evolution, botanical pesticide research aspects. Hopefully, this will be a great opportunity for young scholars. Department of Plant Pathology wishes them good luck in the future.

Mr. Muhammad Umair, student of M.Sc. Hons. in DPP got position of Field Development Officer in HBL



Mr. Muhammad Umair joined Habib Bank Ltd as Field Development Officer in Multan Regional Head Quarters. Mr. Umair has recently completed his M.Sc. Hons. in Plant Pathology from University of the Punjab. Mr. Umair completed his M.Sc. degree with a research thesis on the antifungal activity of green synthesized nanoparticles of graphene oxide, titanium dioxide, iron oxide and iron sulfide for managing early blight of potato. As Field Development Officer, he will be responsible for agri loan distribution and farmers' field visits for the enhancement of production.

Department of Plant Pathology congratulates Mr. Umair on receiving this position and we hope that he will enjoy his new workplace. Best wishes for his professional career too.

Graduates of DPP (session 2021-23) joined Haji Sons as Telemarketing Officer



Huma Shafiq, Shama Sharif and Zobia Waheed (Right to Left); students of M.Sc. Hons. Agriculture (Plant Pathology) (session 2021-23) University of the Punjab, joined Haji Sons as Telemarketing Officer (TMO). We wish them best of luck for a great start in their professional life.



Haji Sons, established in 1955, started by practicing corporate farming. They introduced the technology of greenhouses in Pakistan. Haji Sons is also involved in distribution of hybrid seeds in Pakistan. They claim that the idea of drip irrigation was also first floated in by Haji Sons. In order to save farmer's time and enhance production, Haji Sons' recently set up a seedling production plant for mass distribution. Pesticides and post-harvest technologies are what Haji Sons is next venturing into.

Responsibilities of a telemarketing officer are setting sales targets for the organization; assigning tasks to the Telemarketers to achieve sales objectives; communicating with the customers via calling and email marketing; writing scripts with all information required to understand the products; resolving customer complaints and doubts; attending meetings with the sales team and explaining the products and services to the customers.

DPP graduate got appointment as Agricultural Officer in the Punjab Agricultural Department

Ms. Mamoona Asif, a graduate and current PhD student of the Department of Plant Pathology appointed as Agricultural Officer (Plant Pathology) (BS-17) in the Punjab Agricultural Department (Directorate General Pest Warning & Quality Control of Pesticides) Punjab, Lahore via their office order SO(A-IV)24-48/92-III dated 31-07-2023.

Ms. Mamoona is also enrolled as a PhD student at University of the Punjab. She has submitted her PhD thesis in the field of Plant Pathology. Department of Plant Pathology congratulates Ms. Mamoona on her success and wishes best of luck in her professional career.



Chaudhry Ali Ahmad successfully defended his PhD thesis in the field of Plant Pathology



The Viva-Voice examination and public defence of Mr. Chaudhry Ali Ahmad (Reg. # 2009-UPP-42), for the award of PhD degree in Agricultural Sciences (Plant Pathology) was held on 5th September 2023. The candidate successfully defended his thesis entitled "Effect of Biochar on the bacterial wilt (*Ralstonia solanacearum*) development and biochemical alterations in Eggplant" before Dr. Muhammad Abid (Bahaudin Zakria University, Multan) and Dr. Farman Chaudhary (Minhaj University Lahore).

Dr. Ahmad completed his research work under the supervision of Prof. Dr. Muhammad Saleem Haider (Dean, Faculty of Agricultural Sciences, Punjab University) and Dr. Adnan Akhtar (Assistant Prof. DPP). Department of Plant Pathology congratulates Dr. Ali Ahmad on completing his degree successfully. Dr. Ahmad is working as Deputy Director, Corporate Services & Strategic Planning Department, State Bank of Pakistan, Karachi. Lots of best wishes for future endeavors of Dr. Ahmad in his professional life.



DPP congratulates its graduate Mr. Numan Ali on joining a mushroom-growing company Fungi Matrix

Mr. Numan Ali, after completing his BSc Hons. in 2023 from the Department of Plant Pathology, University of the Punjab, joined Fungi Matrix as a mycologist. Fungi Matrix is a prominent mushroom-growing farm located in Lahore. The company specializes in the cultivation and production of various types of mushrooms. In this role, his main responsibilities involve supervising and assisting in the preparation and maintenance of mushroom-growing culture and substrate. This includes tasks such as inoculation and monitoring of growing conditions. He also supports quality control procedures by sampling, testing, analyzing, and providing solutions to the production department of the farm. His expertise contributes to the efficient growth and quality of mushrooms at the farm in Lahore.



Dr. Waheed Anwar, Assistant Professor DPP won GGPakistan 2023 project



Dr. Waheed Anwar, Assistant Professor, Department of Plant Pathology won GGPakistan 2023 project. The project was submitted to GetGenome on their call. GetGenome is a newly formed charitable organization that provides equitable access to genomics technology for early career researchers all over the world. GetGenome also provides training in the use and publication of genomics data using open science principles. The Sainsbury Laboratory, John Innes Centre, and the University of East Anglia are partners of GetGenome.

The GGPakistan2023 Call For Projects was opened to researchers based in Pakistan who study non-pathogenic, culturable bacteria and would benefit from acquiring the whole genome sequence of their organism(s) of interest. The GGPakistan2023 CFP is managed by the National Selection Committee. Through this research project, DPP will be collaborating with GetGenome in the identification and sequencing of bacteria that may play an important role in disease management and crop enhancement. These bacteria then will be further experimented for various trials.

Dr. Waheed Anwar has vast experience in the field of fungal systematics and bacterial identification. He has also served in the First Fungal Culture Bank of Pakistan for 10 years. He also has expertise in the field of mushroom cultivation and entomopathogenic fungi. Hope that this project will be a facilitator of capacity building and empowerment. Also, this will enrich the repository of the First Fungal Bank of Pakistan, running under DPP.

DPP graduate M. Iqbal started his career in Bruckmann Solutions



Muhammad Iqbal after completing M.Sc. Hons. in Plant Pathology (session 2021-23) from University of the Punjab, joined Bruckmann Solutions (SMC-PVT.) LTD Lahore as Pest Control Specialist. Bruckmann Solutions deals in Termite and pest control management services. They are providing disinfectant and sterilization services in residential, commercial, health and industrial sectors in Lahore Pakistan. Mr. Iqbal has worked on the application of green synthesized Fe_3O_4 nanoparticles for callogenesis and differentiation in *Curcuma longa* for harnessing Curcuminoids against selected phytopathogens. We wish him all the best in his future endeavors.



DPP hosted a round table discussion on “Revival of our commitments with Pakistan”



The Department of Plant Pathology hosted a round table discussion on “Revival of our commitments with Pakistan” on 17th October 2023. The panel was chaired by Prof. Dr. Saleem Haider, Dean Faculty of Agricultural Sciences. Guest speakers were Engr. Waheed Khawaja, Founder President Fiker-e-Iqbal Forum; Mr. Anwar Mahmood Khan, Air Vice Marshal (R); Mr. M. A. Hijazi, Former Faculty Member PU & Corporate Trainer. SVP-FIF; Dr. Nadeem Ishaq Khan, Specialist Tazkia and Iqbaliat. VP-FIF.

Speakers highlighted life changing lessons for youth from Iqbal’s poetry. Discussion took place on Iqbal’s contribution to the Muslim world as one of the greatest thinkers of Islam. Individual talks by all the speakers were followed by a round table discussion in which Faculty of Agricultural Sciences enthusiastically participated. The key point of discussion was how we at an individual level can take Iqbal’s message to the next generation. It was concluded that for a true reformation of this country, we need our youth to reform themselves. And there is no easier way of doing it than by rediscovering the self through Iqbal’s awe-inspiring work.



Nimra Yaseen joined Parwaz Program of Bayer’s Crop Science Division

Crop Science



Nimra Yaseen, a recent graduate of the Department of Plant Pathology at PU joined Parwaz Program which is an initiative by Bayer Pakistan and is aimed at preparing young women for non-conventional roles in the agricultural sector. She has been placed as a trainee in the Field Solution Team at the Manga Research Centre of Bayer’s Crop Science Division. She and her team will be responsible for conducting lab as well as field trials. Through this program, Nimra has become a part of a groundbreaking initiative that not only empowers women in Pakistan but is also part of a collaborative effort, named Samawesh, spanning across India, Bangladesh, and Pakistan. Hope that her journey within the Parwaz Program will be an incredible experience.



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DPP started its M.Sc. Hons. replica/self supporting program from fall 2023



The Punjab University authorities granted permission to start the replica/ self supporting program of M.Sc. Hons. Agriculture Plant Pathology from the academic session 2023 - 24. Overall 40 seats have been approved with a condition to check student enrolment at the time of admission.

The Department of Plant Pathology has been running M.Sc. Hons. Agriculture Plant Pathology Morning Program since 2004. Presently 13 PhD faculty members are involved in teaching and research of this program. The start of replica program will InShaAllah strengthen the Department of Plant Pathology especially in research and publications. This degree in Plant Pathology prepares graduates for careers in academia, industry, and government. The department of Plant Pathology is especially grateful to the Vice Chancellor, University of the Punjab and Dean Faculty of Agricultural Sciences for the trust they have shown in the faculty of Plant Pathology.

M.Sc. (Hons.) Agriculture PLANT PATHOLOGY FALL 2023

Department of Plant Pathology - DPP
Faculty of Agricultural Sciences
University of the Punjab - Lahore

Morning + Replica /Self Supporting
Apply online till 15-08-2023 (11:59 p.m.)

Written Test
21-08-2023
9:00am

Admissions Open

Interview
04-09-2023
9:00am

WHY DPP PU

- 14 highly qualified and experienced faculty members
- HEC approved curriculum
- Accredited by NAEAC in XI category (2023)
- 109 publications in 2022
- 05 in-campus recruitment drives in 2022-23
- First Fungal Culture Bank of Pakistan FCBP
- Biannual Journal MYCOPATH
- Strong alumni network
- Monthly seminars & workshops
- Guidance to students for foreign scholarships
- Availability of research labs & experimental area
- National & international collaborations

RESEARCH AREAS

- Molecular Plant Pathology
- Green Nanotechnology
- Bioinformatics
- Plant Metabolomics
- Fungal Systematics
- Tissue Culture
- Integrated Pest Management
- Plant Virology
- Plant-Microbe Interactions
- Postharvest Pathology
- Seed Pathology
- Environmental Plant Pathology
- Bio-pesticides
- Biochar Role in Disease Management
- Entomopathogenic Fungi
- Mycobiome / Phytobiome

JOB OPPORTUNITIES

- Directorate of Pest Warning & Quality Control of Pesticides
- Fertilizer & Pesticide Companies
- Punjab Seed Corporation
- Pakistan Tobacco Company
- Banking Sector
- Various National & International Research Institutes, Universities & NGOs
- Farm Management (Govt. & Private Sector)
- Pakistan Agriculture Research Council
- Pakistan Council for Scientific & Industrial Research
- Federal Seed Certification & Registration Department
- Soil & Water Testing Labs
- Teaching at all levels

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Department of Plant Pathology, Faculty of Agricultural Sciences
University of the Punjab, Lahore
<http://pu.edu.pk/home/departments/90085/Department-of-Plant-Pathology>
<http://admissions.pu.edu.pk>

Congratulations to the DPP faculty members who received PBI/Honorarium for the year 2022

University of the Punjab approved Performance Based Increment (PBI) and Honorarium Awards for the year 2022 in its syndicate meeting held on 8th July 2023. Five faculty members (TTS) from the Department of Plant Pathology including Prof. Dr. Arshad Javaid, Prof. Dr. Amna Shoaib, Dr. Shazia Shafique, Dr. Adnan Akhtar and Dr. Waheed Akram were declared eligible for both PBI and Honorarium. Whereas newly inducted Assistant Professor, Dr. Waheed Anwar received PBI. University of the Punjab started Performance Based Increment and Honorarium Awards in 2012 for the remarkable performance especially in research, to the TTS faculty members. Prof. Dr. Arshad Javaid continuously got both of these awards for the 11th year for his research activities in the field of agricultural sciences during 2022.

Sl. No.	Faculty Member	Department	Eligibility
17.	DR. BUCHSANA KATKAR	ASSISTANT PROFESSOR	Eligible for PBI
18.	DR. MAHMOOD U. RAISAN	ASSISTANT PROFESSOR	Eligible for PBI
19.	DR. FARVAH IREKES	ASSISTANT PROFESSOR	Eligible for PBI
20.	DR. MOHIDIN-SAEED	ASSISTANT PROFESSOR	Eligible for PBI
21.	DR. ARSHAD JAVAID	PROFESSOR	Eligible for PBI
22.	DR. DR. MUHAMMAD ARSHAD JAVAID	PROFESSOR	Eligible for PBI
23.	DR. SHABAZ AHMED	ASSISTANT PROFESSOR	Eligible for PBI
24.	DR. SAUD ALI	ASSISTANT PROFESSOR	Eligible for PBI
25.	DR. SHANAWAZ MAHMOOD	ASSISTANT PROFESSOR	Eligible for PBI
26.	DR. MUHAMMADREHMAN (AKRAM)	ASSISTANT PROFESSOR	Eligible for PBI
27.	DR. MUHAMMADREHMAN (AKRAM)	ASSISTANT PROFESSOR	Eligible for PBI
28.	DR. MUHAMMADREHMAN (AKRAM)	ASSISTANT PROFESSOR	Eligible for PBI
29.	DR. DR. AMNA SHOAIB	PROFESSOR	Eligible for PBI
30.	DR. SHABAZ AHMED	ASSISTANT PROFESSOR	Eligible for PBI
31.	DR. WAHEED ANWAR	ASSISTANT PROFESSOR	Eligible for PBI
32.	DR. ADNAN AKHTAR	ASSISTANT PROFESSOR	Eligible for PBI
33.	DR. WAHEED AKRAM	ASSISTANT PROFESSOR	Eligible for PBI
34.	DR. MUHAMMADREHMAN (AKRAM)	ASSISTANT PROFESSOR	Eligible for PBI
35.	DR. QURBAN ALI	ASSISTANT PROFESSOR	Eligible for PBI
36.	DR. RAHIM MAHMOOD	ASSISTANT PROFESSOR	Eligible for PBI
37.	DR. MUHAMMADREHMAN (AKRAM)	ASSISTANT PROFESSOR	Eligible for PBI
38.	DR. FARIAH BIZIARI	ASSISTANT PROFESSOR	Eligible for PBI
39.	DR. WAHEED AKRAM	ASSISTANT PROFESSOR	Eligible for PBI
40.	DR. MUHAMMADREHMAN (AKRAM)	ASSISTANT PROFESSOR	Eligible for PBI
41.	DR. ZUBAIR SAWAZ	ASSISTANT PROFESSOR	Eligible for PBI
42.	DR. MUHAMMADREHMAN (AKRAM)	ASSISTANT PROFESSOR	Eligible for PBI
43.	DR. WAHEED AKRAM	ASSISTANT PROFESSOR	Eligible for PBI

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New additions in the inventory of FCBP: *Escherichia fergusonii* and *Weissella confuse*

FCBP (First Fungal Culture Bank of Pakistan) is accepting pathological specimens from all over Pakistan for identification on both microscopic and molecular basis. The bank is also receiving infected plant samples from the Department of Quality Control and Pest Management, Government of Pakistan for pathogen isolation and identification. Recently infected tomato cultures were received from Lahore College for Women University, Lahore. After microscopic examination and ITS sequencing, *Fusarium oxysporum* lycopersi was found associated with the received specimen.

The identified culture with gene bank number is available under accession number FCBP-PTF-1573. Two bacterial isolates were recently identified from industrial effluents and milk as *Escherichia fergusonii* under accession number FCBP-WB-0741 and *Weissella confuse* under accession number FCBP-LB-0742. The cultures are available from FCBP on nominal charges for further Research.



HEC granted NOC for the launch of PhD Plant Pathology at University of the Punjab



The Department of Plant Pathology received No Objection Certificate (NOC) from Higher Education Commission HEC of Pakistan for the start of Doctor of Philosophy (PhD) Plant Pathology at University of the Punjab, Lahore with order number D.D/2023/QAD-NOC/HEC/UOP-Lahore/799 dated 2nd August 2023. MS / M.Phil. / M.Sc. Hons. Agriculture Plant Pathology or equivalent degree will be considered eligible to apply for a PhD at the Department of Plant Pathology.

Currently, the Department of Plant Pathology has 13 PhD faculty members who are involved in different aspects of research in the field of Plant Pathology. Admission to the above mentioned program is subject to the condition of fulfilling the admission/enrollment criteria set by University of the Punjab Lahore. This was the most awaited news for the graduates of the department.



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Prof. Dr. Arshad Javaid represented DPP in an international conference organised by UoP



Prof. Dr. Arshad Javaid presented a paper entitled "Antifungal activity of quinoa leaf extract against *Macrophomina phaseolina*" as an invited speaker in "International Conference on Sustainable Agriculture and Food Security" held at the Summer Campus, Baragali, University of Peshawar from August 27-31, 2023. Dr. Arshad is working in the field of biocontrol and phytochemistry for the last twenty years.



Prof. Dr. Arshad Javaid will provide expertise to PHA on preservation of old trees in Lahore



Learned counsel for PHA (Pakistan Horticulture Authority) proposed a committee to be set up regarding policy and protection for the preservation of old trees in Lahore. Prof. Dr. Arshad Javaid will represent the Department of Plant Pathology, University of the Punjab in this committee. Before this, Dr. Arshad has also worked on Shisham Dieback, especially at the new campus Punjab University.

Beside Dr. Arshad, the committee includes Dr. Hafiz Azhar Ali, Assistant Professor, Department of Zoology, Punjab University; Mr. Javed Gill Forestry Conservator, Forest Department; Mr. Jalil Ahmad, Mr. Ghulam Mustafa Shad, and Mr. Abdullah Cheema, Project Directors Horticulture PHA Lahore. The committee will propose steps regarding protection and preservation of old trees in Lahore.

HYV foundation presented Women Super Achiever Award to Prof. Dr. Tehmina Anjum



Hawks Youth Vision (HYV) organized its first International Women's Leadership Conference & Award on 31st August 2023 in Ali Auditorium Lahore. HYV is a Not-Profit youth organisation in Pakistan, which is working on capacity building, youth empowerment, peace promoting and social awareness in Pakistan.

HYV is a platform where youth can interact and share with each other, possibilities regarding their own future. This conference was organized to honour the strategic and influential role of women leaders in the development of economy, technology and administrative methodologies that promotes the advancement of the government and business organizations according to the standards of global competitiveness.



Chairperson Department of Plant Pathology, PU, Prof. Dr. Tehmina Anjum, received Women Super Achiever Award for her services and achievements in agriculture education. Dr. Anjum has won Charles Wallace Trust Visiting Fellowship 2003 UK, E.L. Rice Award in Allelopathy 2005, the Best Teacher Award in 2005, Endeavour Research Fellowship 2009 Australia and Matsumae Research Fellowship 2011 Japan.



During her PhD research, she isolated a novel pesticidal compound “annuionone H”. Dr. Anjum was among the pioneers who initiated Department of Plant Pathology in University of the Punjab in 2002. She then joined as first Chairperson of the Department after Institute of Agricultural Sciences was upgraded to the Faculty.



Dr. Subhani joined NAVTTC Qualification Development Committee in Islamabad

Dr. Muhammad Nasir Subhani, Associate Professor, Department of Plant Pathology, University of the Punjab participated in Qualification Development Committee (QDC) meeting at the National Vocational and Technical Training Commission (NAVTTC) Headquarters, Islamabad from 21st to 25th of August 2023. Dr. Subhani provided his expertise for the development of teaching material for Crop Protection.

This collaborative effort aimed to curate Teaching Learning Material for Crop Protection. Seasoned professionals from diverse fields came together to enrich this initiative with their invaluable insights. The resulting synergy holds the potential to reshape vocational education. By pooling collective expertise, the experts not only tried to produce teaching materials but also reshaped a comprehensive approach for skill development and refinement.



NAVTTC was established in 2005 to regulate and manage TVET Sector in Pakistan. NAVTTC, under the Ministry of Federal Education and Professional Training, is the apex body mandated to promote, facilitate, regulate, strategize, revamp, approve curricula, train, and provide policy direction for the country's entire Technical & Vocational Education and Training and Development system.



Dr. Subhani has 20 years of teaching and research experience in the field and also well understands Pakistan's agricultural system. In an agricultural country like Pakistan, course development on crop protection on modern lines will definitely contribute to the progress of the agriculture sector through the development of insight of our youth in the subject.



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Dr. Judith K. Brown, Regents Professor, University of Arizona visited DPP

Dr. Judith K. Brown, Regents Professor, University of Arizona visited the Department of Plant Pathology, University of the Punjab on 25th September 2023. Dr. Brown has dedicated her career to the study of vector-borne plant pathogens, especially cotton leaf curl virus. She is well known for her studies on begomovirus and white fly as their vector. She has visited over 65 countries for related surveys and studies. The objective of her latest visit was also to sample cotton from white fly infested areas of Pakistan. Later her team will isolate genetic material from the collected samples in the Department of Plant Pathology, University of the Punjab that will be used for further studies in University of Arizona. Dr. Brown has received International Service Award from American Phytopathological Society, in 2021. Department of Plant Pathology arranged one day seminar on “Cotton Leaf Curl Virus – History, Recombination & Transmission”.



Dr. Aamer Rasool, Deputy Director Pest Warning & Quality Control of Pesticides Faisalabad presented recent data on infestation of white fly in cotton growing areas of Pakistan and correlated with prevailing weather conditions. He shared about the efforts of the Agriculture Department in controlling white fly infestation in Pakistan. He said that field staff was continuously visiting the cotton fields to conduct pest scouting.



He further added that the farmers were advised to use drone technology for spraying their crops in cluster for the complete elimination of whitefly and other injurious insects. He also advised the cotton farmers to listen to the weather reports on radio, television or other media before watering their crops.



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Dr. M. Javed Iqbal, Research Professional, University of Arizona and alumnus of the Department of Plant Pathology, University of the Punjab presented historical dynamics of the geminivirus betasatellite complex and phylogeography of two New World begomoviruses associated with cotton leaf curl disease. Dr. Javed said that the Dynamics of Cotton Leaf Curl Disease (CLCuD) begomovirus-betasatellite complexes continue to exhibit notable variability.



A recent noteworthy transition involves the emergence of the prevailing Cotton leaf curl Multan virus-Rajasthan (CLCuMuV-Ra), along with the introduction of a novel betasatellite variant, Cotton leaf curl Multan betasatellite (CLCuMuB), which has supplanted its predecessor, CLCuMuB.



These unprecedented and widespread evolutionary shifts within the CLCuD virus-satellite complex hold the potential to herald a distinct epidemic characterized by altered attributes. It is worth noting that New World begomovirus species including squash leaf curl virus (SLCV) and abutilon mosaic virus (AbMV) have been reported for the first time in cotton and in Pakistan with predicted instances of recombination between AbMV and SLCV.

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Dr. Brown while talking on phylogenomics of the whitefly vector *Bemisia tabaci* cryptic species globally & timely snapshots of vector mitotypes in Pakistan said that the utilization of the MtCOI sequence as a molecular marker has proven to be highly efficacious in precisely localizing 'sub-cryptic species' of *Bemisia tabaci* at their point of origin. The establishment of a nuclear species threshold, specifically at 1%, corresponds to an approximate 12-13% divergence in the MtCOI gene in *B. tabaci*. Consequently, prior demarcations of cryptic species predicated on 3.5% and 4% MtCOI divergence have resulted in an overestimation of the number of molecular species.

She further added that through the application of both nuclear ortholog and MtCOI phylogenies, the taxonomic landscape is delineated into six significant lineages, namely AMTROP, ASPACAU, ASIA, NAFME (B), MED (Q), and SSA (sub-Saharan). These lineages collectively represent the sibling species group of *Bemisia tabaci*. Remarkably, the nuclear lineages align cohesively with the proposed 'major clades'. Thus, affirming the robustness and congruence of both nuclear and mitochondrial genetic data in discerning the phylogeographical structure of *B. tabaci*. In recent studies done by different HEC scholars at Dr. Brown's lab it was found that, in Pakistan, *B. tabaci* haplotypes grouped with the Asia II major clade, with Asia II-1 mitotype predominating, at 84%, compared to Asia II-5 and II-7, at ~16%, combined.



A number of researchers, industrialists, policy makers from public and private sector including Mr. Jawed Salim Qureshi (CEO, Four Brothers), Dr. Idress Nasir (Cotton Breeder, Four Brothers) Prof. Dr. Moaz ur Rehman (Director CEMB), Dr. Muhammad Khursheed (Director, SBB), Dr. Muhammad Shehbaz (Chairman, Department of Entomology) and Mr. Mohsin Hassan (Sanifa) participated in the event.



Department of Plant Pathology presented shields to the speakers. The seminar was followed by a round table discussion on the topic. Dr. Brown also visited the central lab of Agricultural Sciences and the field area with faculty members. She also met the Vice Chancellor, University of the Punjab, Prof. Dr. Khalid Mehmood in his office. Vice Chancellor Punjab University was briefed about the purpose of Dr. Brown's visit and future plans regarding collaborations of both Universities.



AGRO-PATHOLOGY BULLETIN

Two-day workshop organized by DPP on data science with R on 27th & 28th September 2023

The Department of Plant Pathology, University of the Punjab organized a dynamic two-day training workshop titled "Data Science with R from Basic to Advance" on September 27th and 28th, 2023. The purpose of this workshop was to equip the participants with essential skills in data analysis using the "R" software. Participants from diverse universities across Punjab eagerly joined this enlightening event. The first day of the workshop commenced with the recitation of the Holy Quran. Prof. Dr. Amna Shoaib (focal person) welcomed the attendees and emphasized the significance of data analysis and R software in research and data representation. Following this, Prof. Dr. Tehmina Anjum, Chairperson of the Department of Plant Pathology commemorated this occasion with her words. The guest of honor, Prof. Dr. Kamran Abid, Director of General IT, Punjab University, discussed the importance of data science in today's rapidly evolving technological landscape.



The second day delved deeper into advanced data science techniques, including machine learning with R, data mining, and predictive analytics. The participants were provided with insights into real-world data sets and were guided through the process of building predictive models using R software. The second day concluded with an interactive Q&A session, allowing participants to seek guidance and clarify their doubts regarding data science projects.

Enthusiastic participation from both speakers and participants across various disciplines highlighted the growing interest in data science. Attendees praised the practical, hands-on approach and the clear instruction provided by instructors. It provided valuable skills for evaluating research papers, proposals and projects that use qualitative data.



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The concluding session was joined by the Chief Guest, Prof. Dr. Tahira Sikandar (Principal at Govt Jinnah Associate College for (W) Mozang, Lahore) and Guest of Honour, Prof. Dr. Aneela Anwar (University of Engineering and Technology, Lahore). Both guests ignited their presence with some words and motivated participants even more.

Students and faculty from different departments including Lahore College for Women University Lahore, Kinnaird College for Women University and Minhaj University Lahore participated in the workshop. Workshop sessions integrated the principles of analysis with skills needed to conduct rigorous qualitative data analysis. Participants left the workshop with the knowledge and skills to effectively analyze and evaluate textual data.

In recognition of their support and involvement, shields were awarded to Chief Guest, Guests of Honor, and Speaker. These shields were presented by the Chairperson Department of Plant Pathology and the Focal Person of the workshop. Certificates of appreciation were also distributed to the hardworking organizing team. At the end of the workshop, participants expressed their gratitude to the organizing team of the workshop including Prof. Dr. Amna Shoaib (focal person) and Prof. Dr. Arshad Javaid for organizing such an insightful and impactful training event. The success of this workshop has encouraged the Department of Plant Pathology to consider more such initiatives in the future. Plans are already underway to offer advanced data science courses.



Ms. Tehmina Bahar & Ms. Muniba Abid Malik successfully defended their PhD theses

Ms. Tehmina Bahar and Ms. Muniba Abid Munir Malik successfully defended their PhD theses on 4th and 6th October 2023. Both students have been supervised by the Dean Faculty of Agricultural Sciences; Prof. Dr. Muhammad Saleem Haider. The title of Ms. Tehmina's thesis is "molecular epidemiology of Gemniviruses infecting weeds and ornamental plants". Prof. Dr. Tariq Mukhtar, Department of Plant Pathology PMAS-Arid Agriculture University Rawalpindi and Prof. Dr. Shehbaz Talib Sahi, Ex-Chairman Department of Plant Pathology, University of Agriculture Faisalabad were there as External examiners of Ms. Tehmina Bahar. The candidate showed various weeds and ornamental plants from which she isolated Gemniviruses during her research work and recommended that farmers should ensure safe eradication of these weeds in fields to avoid virus infection. She works as an Agriculture officer in Plant Protection department.



Ms. Muniba worked on a research project entitled "CRISPR/Cas9 based strategy to control Mastreviruses in Pakistan" during her PhD. She defended her thesis in the presence of Prof. Dr. Muhammad Tahir, Department of Plant Biotechnology, National University of Science and Technology, Islamabad and Prof. Dr. Naveed Aslam Malghani, Department of Plant Pathology, Faculty of Agriculture and Environmental Sciences, The Islamia University Bahawalpur.



The faculty and PhD scholars of different departments of Punjab University were present on thesis defense of both students. After presenting their work in front of the audience, both students satisfactorily answered queries from the examiners and the audience. Department of Plant Pathology congratulates both PhD scholars on successfully achieving this milestone.



AGRO-PATHOLOGY BULLETIN

Prof. Dr. Arshad Javaid presented research paper in ICETBB-2023 at Hazara University



Prof. Dr. Arshad Javaid presented a paper entitled "Differential response of *Macrophomina phaseolina* to inflorescence extract of four quinoa (*Chenopodium quinoa* Willd.) genotypes" in "Fifth International Conference on Emerging Trends in Bioinformatics and Biosciences (ICETBB-2023)" held on September 14-16, 2023 at Hazara University Mansehra. He also chaired the first technical session on plants and agricultural sciences. During his visit, Dr. Arshad also visited National Tea and High Value Crops Research Institute, Shinkhari. This Institute is working under the auspices of Pakistan Agricultural Research Council (PARC), Ministry of National Food Security & Research, Islamabad.



DPP will collaborate in a funded project of Rise AG Pakistan on problems of stored grains



Rise AG Pakistan approved a joint industrial project of worth 5.125 Million Rs in which Ms. Tiyyabah Khan, Research Officer, Department of Plant Pathology is the co-principal investigator. The project is for two years during which the team will work on postharvest diseases and insecticide resistance in insect pests of stored grains. Rise AG is one of the leading organizations in Pakistan, which deals with agrochemicals including fertilizers, pesticides, and micronutrients nationwide. The widespread use of insecticides for the management of insect pests in storage facilities and food industries has caused insecticide resistance a frequent issue worldwide. Nonetheless, this issue has been little explored in Pakistan which resulted in control failures and increased dosage of insecticides. Hope this project will bring some interesting findings that will open new horizons in the field.

AGRO-PATHOLOGY BULLETIN

Postgraduate students of DPP enjoyed an experiential learning during their study trip

A three day field study trip (6-8 Oct. 2023) was organised by the Department of Plant pathology for MSc. Hons. second semester students in northern areas of Pakistan. A group of twenty students was accompanied by Dr. Waheed Anwar, Assistant Professor DPP. This trip was planned as a curriculum requirement of their minor subject entitled “Mushroom biology and technology”, being taught by Dr. Waheed Anwar. Students enjoyed collection of native mushrooms and wood degrading fungi in Ayubia National Park and surroundings of Khanaspur. They preserved collected mushrooms in jars after identification.



Long walks on uncommon tracks while enjoying vegetation, scenery and fresh air of Khanaspur and surrounding areas students had an experiential learning in this short trip. The Khanaspur Campus of the Punjab University, now named as the Sir Syed Campus, fully supported this study tour.

Keeping in view the importance of field study tours, especially in biological sciences, the Department of Plant Pathology regularly organises study trips and has plans to continue this in the future as well. We acknowledge the support of Punjab University in providing transport and bookings in Khanaspur Campus for students, teachers and supporting staff.



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DPP celebrated World Fungi Day & World Mushroom Day

October has become Fun-Guy month. It starts with the celebration of Fungus Day in communities around the World. In the middle of October, it is World Mushroom Day. And what better way to celebrate than by attending an informative seminar and meeting people who actually made fungi as Fun-guy? Department of Plant Pathology celebrated this day on 9th October 2023 and organized a seminar on “Beneficial Fun-guy”. Dr. Yasar Saleem Principal Scientific Officer PCSIR Lahore talked on “Remarkable value of fungi for the production of industrial bio-products”. He showed related facilities and ongoing research in biotechnology division at PCSIR Lahore. Dr. Fathia Mubeen, DCS-Soil & Environmental Biotechnology Division NIBGE Faisalabad also joined with her products and gave a presentation on “Fungal biopesticides, need of time for sustainable agriculture”.



Following her, Mr. Rehan Qadeer, CEO O'Mushrooms shared his story of how he after completing his engineering joined a cellular company but left and then started Mushroom business with a Chinese collaborator. He talked about cultivation of various mushrooms, value addition technology, export opportunities and potential in Pakistan. All the three speakers displayed their products in which students showed special interest.

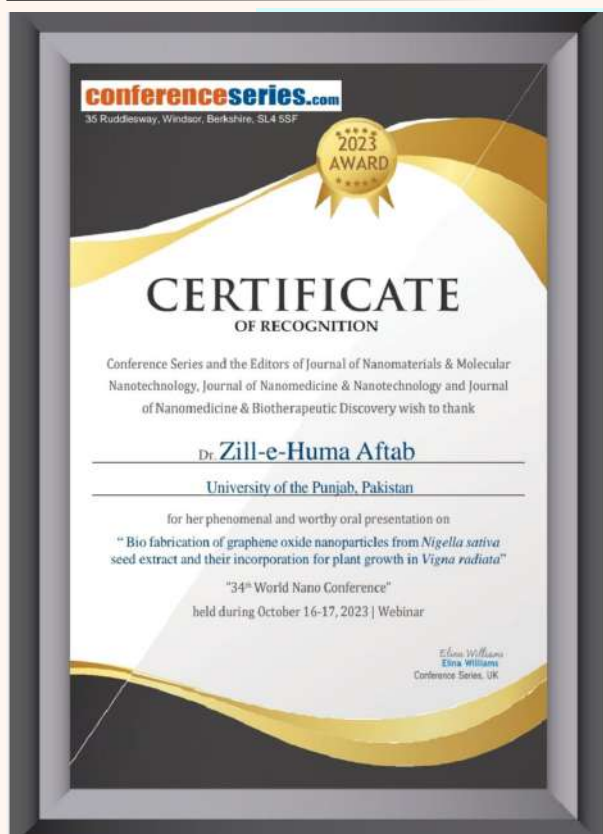


The audience asked relevant questions. They showed special interest in biopesticides, biofertilizers and fungal products including Ganoderma tea and fungal mycelial packaging. different kinds of edible mushrooms also gained the attraction of the audience. Participants from other institutes including CEMB, NIBGE, PCSIR-LHR, LCWUL, V-Green, and Fungi Matrix were also present. The department presented shields to the speakers. In the end, the Dean Faculty of Agricultural Sciences, University of the Punjab, Prof. Dr. M. Saleem Haider thanked all the presenters and audience for actively taking part in the seminar. He also appreciated the efforts of DPP for organizing the event. The event ended with a cake-cutting ceremony chaired by the Dean Faculty of Agricultural Sciences Punjab University.

AGRO-PATHOLOGY BULLETIN



Dr. Zill-e-Huma Aftab presented her research findings in World Nano Conference 2023



Dr. Zill-e-Huma Aftab, Assistant Professor, DPP, online presented her research paper at 34th World Nano Conference held between 16 - 17 October, 2023 in Vancouver, Canada. The theme of the conference was "Invention and innovation of new concepts in the field of Nanotechnology". Dr. Huma who is working in field of green nanotechnology and its application in crop protection and growth enhancement for last six years talked on "Biofabrication of graphene oxide nanoparticles from *Nigella sativa* seed extract and their incorporation for plant growth in *Vigna radiata*."

Graphene is undoubtedly emerging as one of the most promising nanomaterials because of its unique combination of superb properties, which opens the way for its exploitation in a wide spectrum of applications ranging from electronics to optics, sensors, and biodevices. Dr. Huma is the pioneer in finding application of graphene nanoparticles in agriculture in Pakistan. Around three hundred researchers from around the world participated in this conference and presented their research in diverse fields of nanotechnology.

Dr. Ali - an alumnus of DPP joined Government College Lahore University as Lecturer



Dr. Muhammad Ali, an alumnus of the pioneer batch of the Department of Plant Pathology joined as the first permanent Lecturer in the Department of Plant Pathology, Government College University Lahore. After doing B.Sc. Hons and M.Sc. Hons from the Department of Plant Pathology PU, Dr. Ali also earned PhD degree in Plant Pathology from the same department. During his PhD he worked on biological control of damping off in chilies.

Besides his interest in Agriculture and Plant Pathology, Dr. Ali is also interested in studying wild Mushrooms. He has worked in the Sustainable Development Study Centre, Government College University, Lahore and as a Research Associate at the University of the Punjab, Lahore. Government College University has started its BS program in Agriculture in Fall 2023.

AGRO-PATHOLOGY BULLETIN

Two-day workshop on Nanotechnology (25 - 26 October 2023) by DPP was a great success

Departments / Universities Participated

Dept. of Environmental Sciences, Quaid-e-Azam University Islamabad
Dept. of Microbiology, Shaheed Benazir Bhutto Women University
Dept. of Physics, University of Engineering & Technology Lahore
Dept. of Plant Pathology, University of Sargodha
National Institute of Food Science & Technology, University of Agriculture, Faisalabad
Dept. of Medical Lab Technology, University of Haripur
Dept. of Botany, Govt. College University Lahore
Dept. of Botany, University of Education Lahore
Dept. of Zoology, Minhaj University Lahore
Dept. of Botany, Minhaj University Lahore
Dept. of Biology, Lahore Garrison University
Dept. of Biotechnology, Lahore College for Women University
Dept. of Botany, Lahore College for Women University
School of Life Sciences, Forman Christian College University Lahore
School of Chemistry, University of the Punjab
College of Earth & Environmental Sciences, University of the Punjab
Institute of Zoology, University of the Punjab
School of Biochemistry & Biotechnology, University of the Punjab
Institute of Microbiology & Molecular Genetics, University of the Punjab
Dept. of Plant Pathology, University of the Punjab



In recent years number of students in biological sciences working in the field of Nanotechnology has increased manifold. Being in biological sciences, students face problems in interpretation of characterization data regarding their nanoparticles. Department of Plant Pathology organized 2-Day workshop on interpretation of data related to nanotechnology. Dr. Muzamil Aftab, HOD Physics Department, Shah Hussain College Lahore provided training on XRD, FTIR, SEM and UV-Vis data of nanoparticles. He also provided training on Origin which is a data analysis software. Dr. Muzamil has 10 years of experience in the field of Nanotechnology. He earned his PhD degree in this field and has a good number of publications in internationally reputed journals. Now Dr. Muzamil is providing expertise to Green Nano-Technology Group of the Department of Plant Pathology; University of the Punjab.

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On the first day session was started with a discussion on the evaluation of crystallite size and lattice strain using XRD using Scherrer method, Williamson Hall analysis, size strain plot method, Halder Wagner plot method and Wagner Aqua Plot method. This was followed by a session on the preparation of topographic histograms using SEM, EDS analysis and surface morphology using SEM.

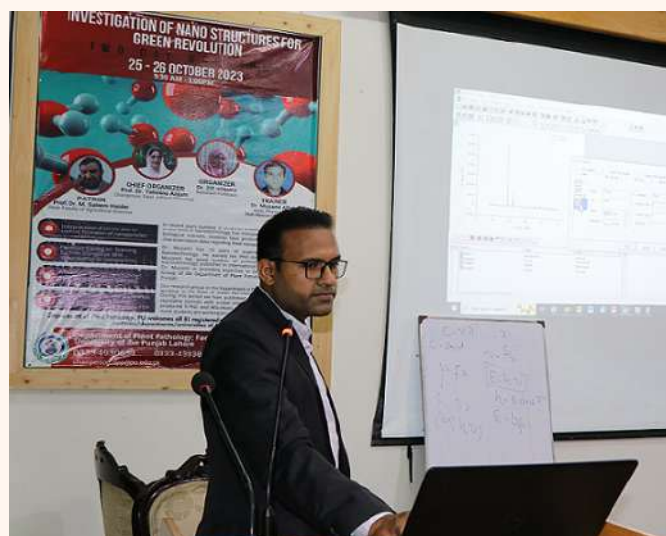
On second day, topic of the session was UV-Vis spectroscopic data regarding nanoparticles. Different ways of presenting data was discussed. A hands-on training on Origin was provided to the participants that included a graphic representation of data using Origin software. Each session was followed by a question-answer session. Around 90 participants from 20 different departments and universities registered for the workshop. Department of Plant Pathology presented a shield to the resource person as a token of remembrance. Participants highly appreciated the workshop that was depicted through their comments in feedback performa. They also demanded more such workshops in future on various other topics. Chairperson Department of Plant Pathology, thanked all the participants for their interest in the workshop and especially acknowledged efforts of Dr. Muzamil Aftab for making all sessions interactive. She also appreciated the organizing committee, especially Dr. Zill-e-Huma Aftab, and Dr. Waheed Akram, Assistant Professors and students including Mr. Maroof Siddiqui, Mr. Taqqi Abbas, Mr. Ali Raza, Mr. Ali Hassan and Mr. Ghulam Nabi.



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Farmers, agri students, teaching faculty, agri researchers and experts all at one platform

One day training workshop on smart agriculture transformations was held in the Department of Plant Pathology, University of the Punjab on 2nd November 2023 in collaboration with Green Circle Pakistan. In this workshop around 100 farmers from all over Punjab and Sindh participated physically, whereas more than 500 farmers were also taken online during the event. The basic purpose of the event was to provide our farmers with a forum where they can interact with agriculture experts to learn new technologies of farming and also get answers to their queries. Moreover, the workshop provided a forum for the students and researchers of DPP to listen to farmers and agriculture experts.



The Chairperson Department of Plant Pathology, Prof. Dr. Tehmina Anjum welcomed all guests and introduced the objectives of the event. Dr. Anjum also thanked Fertiscience, Bank Alfalah and DTL for sponsoring the event. She also appreciated the efforts of the organizing team especially Dr. Nasir Subhani, Associate Professor DPP; Dr. Waheed Akram and Dr. Zill-e-Huma Aftab, Assistant Professors DPP. Resource persons included Director Soil and Water Testing Laboratories Dr. M. Akram Qazi; Director Wheat Punjab AARI, Dr. Javaid Ahmad; Mr. Sajid Iqbal Sandhu, National Agriculture Expert; Dr. Shahzad Basra, Professor & Advisor Virsa forms and Mr. Tariq Tanveer, CEO Agri-tourism. Mr. Hammad Mian from Fertiscience; Mr. Yahya Hussain Wahla from Bank Alfalah and Mr. Ahsan Rana CEO, DTL were also present.

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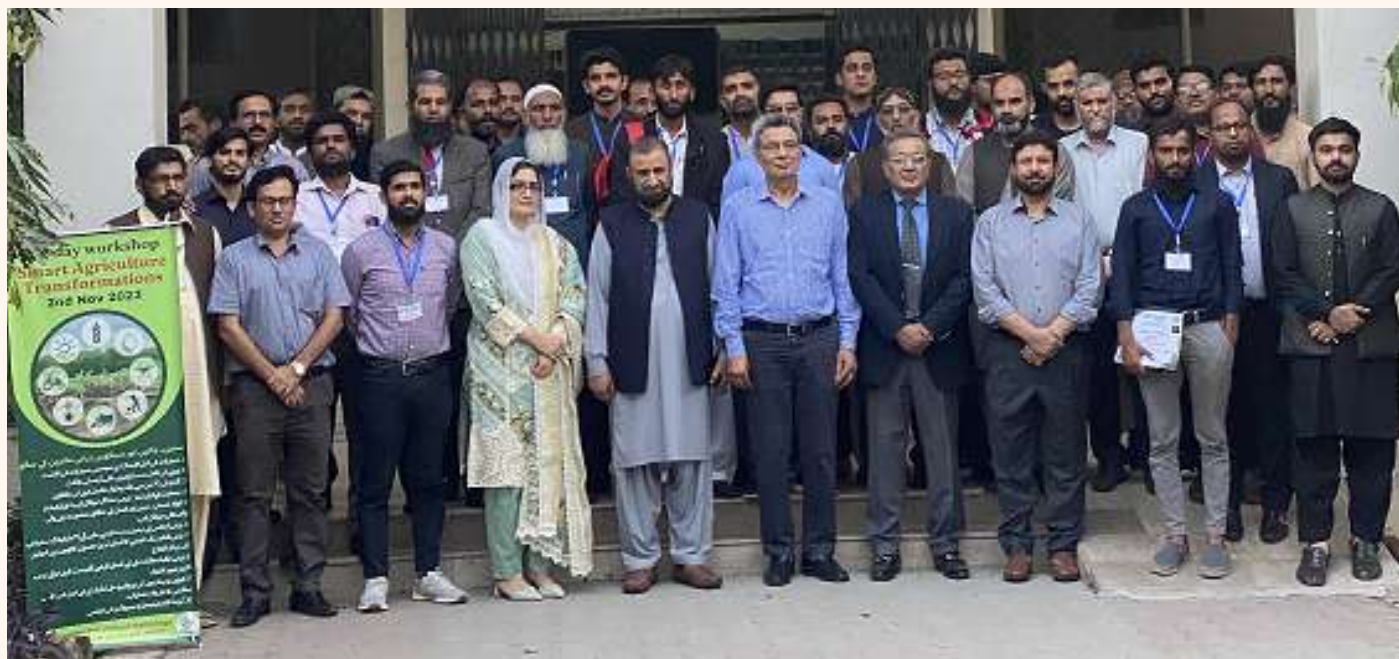


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Dr. Qazi talked about the importance of water and soil testing for farmers. He also discussed in detail about balanced fertilizer application and use of a mobile App “Khaad Hisaab”. Dr. Javaid Ahmad provided details of wheat growing strategies and methods to increase yield up to 60 to 80 munds. Dr. Ahmad said AARI is taking a challenge in developing new germplasm to tolerate drought and heat and also improving the nutrients uptake. CEO Green Circle, Mr. Sajid Iqbal Sandhu provided information on tunnel farming, strawberry and papaya farming and value addition in these products. Prof. Dr. Shahzad Basra spoke on healthy lifestyle and superfoods. Mr. Tariq Tanveer, CEO Agri-tourism guided participants about value addition and new concepts of income generation.



Dean Faculty of Agricultural Sciences, Prof. Dr. Saleem Haider appreciated the efforts of the Department of Plant Pathology for organizing this workshop. He highlighted the importance of such workshops and said that for the uplifting of agriculture in Pakistan, academia, government and private sector should work together. Certificates and shields were distributed among the participants and resource persons.



Students of Lahore Garrison University visited Department of Plant Pathology, PU



On 15th November 2023, Students of BS Biotechnology and BS Zoology from Lahore Garrison University visited the Department of Plant Pathology, University of the Punjab. The group was led by their teaching faculty including Dr. Fouzia Qamar (Associate Professor), Dr. Sumera Mazhar (Associate Professor) and Dr. Uzma Rafee (Assistant Professor). Students were given a brief introduction of the department by the Chairperson, which was followed by their visit to various labs, First Fungal Culture Bank of Pakistan and the experimental area of DPP.



Another PhD scholar of Plant Pathology successfully went through her PhD defense



Ms. Shagufta Perveen successfully defended her PhD thesis on 22nd November 2023. She on “Polyphasic taxonomic studies of phytopathogenic species of Genus *Alternaria*” under the supervision of Dr. Naureen Akhtar and Dr. Amna Shoaib. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology PMAS-Arid Agriculture University Rawalpindi and Prof. Dr. Shehbaz Talib Sahi, Ex-Chairman Department of Plant Pathology, University of Agriculture Faisalabad were there as External examiners of Ms. Shagufta Perveen. During her PhD she got a chance to visit the Department of Plant Pathology, Washington State University, USA under IRSIP program. DPP wish her all the best for her future endeavors.

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Chairperson DPP evaluated agriculture projects in the 2nd All Punjab Innovation Expo



Punjab Higher Education Commission hosted All Punjab Universities 2nd Innovation Expo on 20th November 2023. The event featured as many as 400 research projects and innovative ideas, with a focus on encouraging students who excel in research project models by rewarding them. Chairperson Department of Plant Pathology, Prof. Dr. Tehmina Anjum was invited as a guest of honor. She evaluated 28 agriculture projects displayed by various universities of Punjab, while students described their projects and answered various queries. Projects were marked on basis of innovation, sustainability and impact on society.



The main objective of this expo was to offer a platform for university teachers and students to showcase the projects/start-ups thus promoting innovation and entrepreneurship with a focus on product development and commercialization. It also provided an opportunity for participating universities to excel through healthy competition among faculty/graduates by exhibiting their respective projects. The first team was awarded Rs 100,000 while the runnerups received Rs 50,000.



The expo would lead to providing a platform for industry-academia linkages, that would adopt the real-life problem-solving approach and address problems with the joint effort of industry and academia. Department of Plant Pathology appreciates the efforts of Chairperson PHEC, Dr. Shahid Munir for a successful and grand event. Governor Punjab Engineer Balighur Rehman, Chairman Benazir Income Support Dr. Amjad Saqib, Federal Minister Wasi Shah, Provincial Health Minister Dr. Javed Akram, Former Minister Engineer Qamarul Islam, Chairman APSP Chaudhry Abdul Rehman, Chairman Crown Residency Kashif Nawaz Randhawa, Vice chancellors, deans of various universities, local industry owners, officials, government policymakers and a large number of people from different walks of life were present.

Active participation of more than 50 faculty members and students of DPP in 8-ICPPS 2023



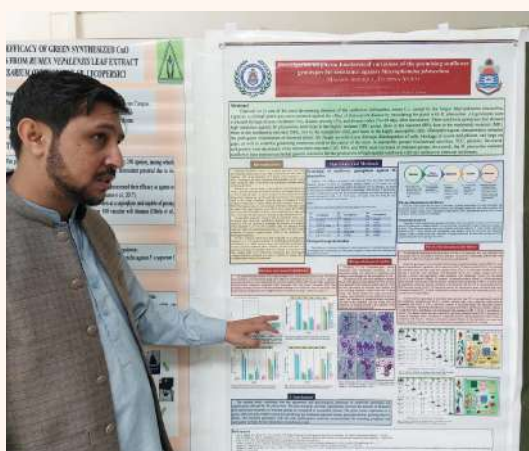
Department of Plant Pathology, Faculty of Agriculture and Environment, the Islamia University of Bahawalpur in collaboration with Pakistan Phytopathological Society and Australian Center for International Agricultural Research organized the 8th International Conference on Sustainable Agriculture and Food Security. The conference continued from 26 to 28 November 2023. Inaugurating the conference, Vice Chancellor, Islamia University of Bahawalpur, Prof. Dr. Naveed Akhtar welcomed the distinguished guests and expressed the importance and need of the conference. Prof. Dr. Tanveer Hussain Turabi, Dean, Faculty of Agriculture and Environment, appreciated the arrival of the delegates in the conference and spoke about the effects of climate change in the agriculture sector. The focal person of the conference, Prof. Dr. Naveed Aslam Malghani, said that 530 scientists, teachers, researchers and experts from America, China, Turkey, Italy, Saudi Arabia and Pakistan registered for the conference.

More than 50 faculty members and students of the Department of Plant Pathology, University of the Punjab actively participated in the event. Dean FAS, Prof. Dr. Saleem Haider; Chairperson DPP, Prof. Dr. Tehmina Anjum, Prof. Dr. Arshad Javaid, Dr. Zill-e-Huma Aftab, Dr. Nasir Subhani, Dr. Waheed Anwar, Dr. Adnan Akhtar presented their research on different aspects of plant pathology including virology, biodetoxification of mycotoxins, green nanotechnology for crop protection, entomopathogenic fungi, and biochar induced resistance. Students also presented their work in both oral and poster modes. DPP students also participated in PPS-ACIAR Mentoring Program for PhD and early careers held on 25th November 2023. This conference provided an opportunity to the scholars and people involved in agriculture to meet and discuss the latest trends in crop and disease prevention, use of technology and new fields of research.



On the second day of the conference, Prof. Dr. Tariq Mukhtar, President of Pakistan Phytopathological Society, Prof. Dr. Hongwei Zhao, Department of Plant Protection, Nanjing Agricultural University, China, Mr. Maxiayoan Department of Plant Protection, Nanjing Agricultural University, China, Mr. Kaleem Afzal Corteva Agriscience, Mr. Manzoor Hussain Soomra, President ECO Science Foundation Islamabad, Prof. Dr. Fateh Muhammad Marri, Vice Chancellor Sindh Agriculture University, Tando Jam, Prof. Dr. Muhammad Naeem, Vice Chancellor PMS Arid University Rawalpindi, Prof. Dr. Ashfaq Ahmad Qureshi Vice Chancellor Government Sadiq College Women University Bahawalpur gave a detailed speech. More than 430 papers were presented in the conference.

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Prof. Dr. Arshad Javaid continuously in world's top 2% scientists for the 3rd time in recently published rankings by Stanford University



Using the Scopus author profiles as of 1 Oct 2023, Stanford University released the latest top 2% scientists in various scientific fields. The list was prepared by Prof. John Ioannidis and his team from Stanford University, the updated database (version 6) provides standardized information on citations, h-index, co-authorship-adjusted hm-index, citations to papers in different authorship positions, and a composite indicator. The selection is based on the top 100,000 scientists by c-score (with and without self-citations) or a percentile rank of 2% or above in the sub-field. This work uses Scopus data provided by Elsevier through ICSR Lab.

This version (6) is based on the October 1, 2023 snapshot from Scopus, updated to end of citation year 2022. Based on data from researchers' entire careers, 187 scientists from various fields of specializations in Pakistan, hailing from 76 national universities and higher education institutions, both public and private sectors, have been featured in the aforementioned list of the world's top 2% scientists for the year 2023. Prof. Dr. Arshad Javaid from the Department of Plant Pathology is among the 10 researchers of the University of the Punjab, who have been included in this list. Vice Chancellor, University of the Punjab, Prof. Dr. Khalid Mehmood acknowledged their contribution in a ceremony.



Mehwish Rauf, another name in the list of those who successfully defended their PhD thesis

The viva-voice examination and public defence of Ms. Mehwish Rauf for the award of PhD degree in Agricultural Sciences (Plant Pathology) was held on 7th December 2023. The candidate successfully defended her thesis entitled "Begomovirus(es) titer in vector *Bemisia tabaci*, selected hosts and its relationship with transmission and symptoms severity" before Prof. Dr. Naveed Malghani, Chairman Department of Plant Pathology Islamia University Bahawalpur and Dr. Farman Ahmad Chaudhary, Visiting Professor Minhaj University Lahore. The candidate completed her research work under the supervision of Prof. Dr. M. Saleem Haider, Dean Faculty of Agricultural Sciences PU. DPP wishes her all the best in her future endeavors.



An MOU signed between Punjab University and Memorial University of Newfoundland Canada

Punjab University and Memorial University of Newfoundland Canada signed a Memorandum of Understanding (MOU) on 6th December 2023 to stride towards fostering international cooperation in education and research. In this regard, a ceremony was held at PU VC's office. The MoU was signed by the President of Memorial University Dr. Neil Bose and PU VC Prof Dr. Khalid Mahmood. On this occasion, Dean Faculty of Agricultural Sciences Prof. Dr. Muhammad Saleem Haider, Director External Linkages Dr. Sobia Khuram and faculty members were present. According to MoU, PU and MUN will jointly work on faculty and students exchange programs, exchange of publications, research materials, newsletters, joint projects related to research, teaching and faculty development, initiatives including joint or collaborative degree programs to offer students diverse educational pathways. Prof Dr. Saleem Haider and Dr. Mumtaz Cheema Associate Vice President Research and Graduate Studies MUN will be the focal persons for the collaboration.



Bachelor degree holder of the Department of Plant Pathology joined AAP



Ms. Uqsal Mannan, after completing her BSc Hons. in Plant Pathology in 2023 from the Department of Plant Pathology, University of the Punjab, joined the Agrarian Association Pakistan (AAP) as R&D and Office coordinator. Their main objective is to educate our youth and farmers so that they can become valuable assets of our country.

In this role, her main responsibilities are to gather data on all crops of Pakistan, address the issues related to agriculture, currently faced by our country, and provide a better management plan for the future. In this way, she is helping our nation and country too.

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Participation of DPP in 1st UMT International Conference on Life Sciences UMTCLS - 2023



University of Management & Technology organized the first international conference on life sciences: Exploring the frontiers in biological research on 13 - 14 December 2023. Faculty of the Department of Plant Pathology, PU presented their findings at the event. Chairperson DPP, Prof. Dr. Tehmina Anjum also chaired a technical session on Plant Sciences along with Prof. Dr. Javed Iqbal (Ex-Chairman, Department of Botany, University of the Punjab). Dr. Anjum also presented her work on green nanotechnology and its role in the management of soil-borne pathogens. She discussed in detail on effect of synthesized nanoparticles on fungal and plant physiology and biochemistry.



Dr. Waheed Akram, Assistant Professor DPP talked on the combined application of beneficial microbes and chemical elicitors to manage Fusarium wilt of tomato. Dr. Zill-e-Huma Aftab, Assistant Professor DPP, shared her work on biofabrication of zinc oxide nanoparticles to rescue mung bean against Cercospora leaf spot. Dr. Tehmina Anjum congratulated Dr. Muhammad Sohail Afzal, Chairman Department of Life Sciences UMT on holding a successful conference.

Chairperson DPP chaired a session at Biology National Conference held at LGU



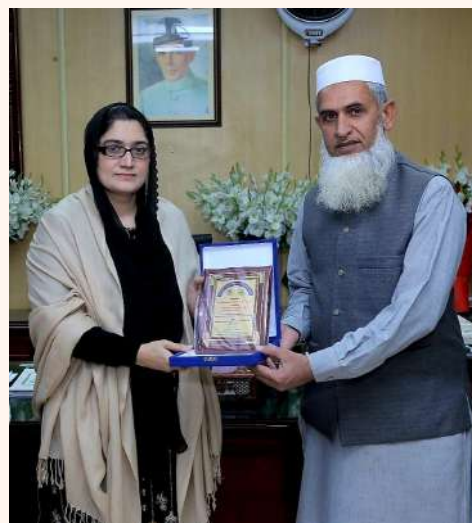
Department of Biology, Lahore Garrison University Lahore, hosted Biology National Conference on Frontiers in applied biological sciences between 13-14 December 2023. Dr. Uzma Rafi and Dr. Ayesha Khalid, Assistant Prof. LGU were the focal persons of the conference. Researchers from diverse fields of biology participated in the event.

Chairperson DPP, Professor Dr. Tehmina Anjum chaired a session along with Prof. Dr. Zulfiqar Ali, Institute of Zoology, University of the Punjab and Prof. Dr. Tehreema Iftikhar, Department of Botany, Government College University Lahore. Shields and certificates were presented to speakers and session chairs. We congratulate Maj. Gen. Shahzad Sikander HI (M) (Retd.), Vice Chancellor LGU; Col. Dr. M. Amjad Khan, Dean Faculty of Basic Sciences; Dr. Imran Afzal, HOD Department of Biology and the organizing team for a successful event.

AGRO-PATHOLOGY BULLETIN

Directorate General PW&QCP Punjab Lahore invited Chairperson DPP for an expert talk.

Director General Pest Warning and Quality Control of Pesticides, Dr. Ghulam Abbas invited the Chairperson, Department of Plant Pathology University of the Punjab Prof. Dr. Tehmina Anjum for a seminar on 12th Dec. 2023. They discussed various pathological issues of vegetables, wheat, cotton and rice and decided to collaborate on future projects. Chairperson DPP also gave a talk on the current fungal and bacterial problems of vegetables in Pakistan, which was followed by a panel discussion and question answer session. Deputy Director (Plant Protection) - Pest Warning and Quality Control of Pesticides, Ms. Sabin Fatima was the focal person of the seminar. Several officers of pest warning and quality control of pesticides Punjab, Lahore attended this seminar that was arranged under an ADP project regarding mitigating the emerging issues of pesticide residues in vegetables and rice through capacity building of farmers and extension agents.



Chairperson DPP covered economically important diseases of vegetables including fungal and bacterial rots, early and late blight, powdery and downy mildew, anthracnose, neck rot, black scurf, black leg, scab, damping off and rust of garlic, onion, potato, brinjal, pea, tomato, chili and cucurbits. symptoms of these diseases and their management were discussed in detail. Dr. Anjum also answered questions from the audience. She also introduced facility of First Fungal Culture Bank of Pakistan in DPP, PU.





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