

Khizar Hayat

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● EDUCATION

2021 – 2024

M.PHIL IN BOTANY Islamia College Peshawar, Pakistan

CGPA 3.8/4.0

| **Thesis Title:** Pollen morphology of some selected species of family Asteraceae

2018 – 2020

M.SC IN BOTANY Islamia College Peshawar, Pakistan

CGPA 3.2/4.0

| **Thesis Title:** Impact of salt stress on selected cultivars of wheat under laboratory condition

2016 – 2018

B.SC Bacha Khan University Charsadda, Pakistan

Field of study Natural/Biological sciences | **Final grade** A

● RESEARCH EXPERIENCE

2022 – 2023

Research Project “Pollen morphological investigation of some selected species of family Asteraceae from Pakistan”

- Measurement and surface analysis of palynomorphs using light and scanning electron microscopy
- Determination of pollen vitality by using four staining methods
- Germination characteristics of pollen with an in vitro germination method
- Identification of collected plants using published keys and flora of Pakistan

04/2020 – 09/2020

Research project “Impact of salt stress on selected cultivars of wheat under laboratory condition”

- Plan and organize experiments, in setting up research protocols
- Characterize the responses of wheat cultivars under different salt stress conditions
- identify the significant difference using statistical tools between control and treated plants

● PROFESSIONAL EXPERIENCE

04/2024 – 09/2024

QA INSPECTOR CORONET FOODS PVT LTD, HARIPUR KPK

- Maintaining the cleanliness of sorting and areas storage.
- Evaluate and sorting food safely

06/2023 – 07/2023

INTERN HERBION PAKISTAN PRIVATE LIMITED, KARACHI, PAKISTAN

- Verify the identity, purity, and potency of herbal products
- Identification and separation of bioactive compounds using HPLC, and GC Techniques
- Formulation and standardization of active compounds
- Research on new herbs and drug development

TRAINER AT SINDH BIOTECHNOLOGIST ASSOCIATION, PAKISTAN

- Provide personalized feedback to help students improve their writing skills
- Conduct interactive sessions to enhance writing techniques
- Address specific areas for growth such as grammar, clarity and organization
- Guiding trainees with writing prompts, group discussions and collaborative exercises

HONORS AND AWARDS

Prime Minister Laptop Scheme Program (Laptop Awardee) [2024]

Higher Education Commission Scholarship M.Sc. (Merit Base) [2018 – 2020]

Honorary Hifzul Quran Award in BSC (Merit base) GDC Tangi, Charsadda [2016]

CONFERENCES

Participated in the 10th National Conference on “Impact of Climate Change on Biodiversity, Water and Natural Resources” at Bara Gali Summer Camp, University of Peshawar Pakistan. July 09-10, 2024

2nd student conference of plant biology Vienna, 22-23. February 2024 (Online attendee)

Participated in the 7th International and 16th National Conference of PBS on “Plant Resources: Current Trends, Challenges, and Solutions” at Islamia College University Peshawar Pakistan. March 23-27, 2018

CONFERENCE ABSTRACT

Hayat, K., Khan, M.N., Shah, S., Bangash, S.A.K., Ibrahim, M., Kaplan, A., (2024). Biochar Application and Waterlogging Tolerance of Plants. In A. Ullah (Eds.), Proceeding of the 10th National Conference on Impact of Climate Change on Biodiversity, Water and Natural Resources (pp. 12-13).

PUBLICATIONS

Hadi, F., Dost, S., Khan, M. N., Ullah, B., Razzaq, A., **Hayat, K.**, Kaplan, A., Iqbal, M., Shah, S. N., Wahab, S., Butt, R. F., Razak, S. A., Ercisli, S., Ali, M. A., Alkahtani, J., (2024). Foliar LM and SEM Insights: Investigating Epidermal Features and its Taxonomic Implications in Some Verbenaceae Taxa. *Polish Journal of Environmental Studies*, 34(2025), 1-13

Hadi, F., Jamal, U., Khan, M. N., Razzaq, A., **Hayat, K.**, Zaman, F., ... & Eldin Darwish, D. B. (2024). Micromorphological Foliar Screening for Identification of Moraceae Taxa using Light Microscopy (LM) and Scanning Electron Microscopy (SEM) Techniques. *Polish Journal of Environmental Studies*, 33(4).

Hayat, K., Khan, W. M., Khan, M. N., & Shah, S. N. (2023). Pollen morphological investigation of selected species of family Asteraceae from Pakistan by using light and scanning electron microscopy. *Microscopy Research and Technique*, 86(10), 1258-1273.

Shah, S., Shah, S. M., Ullah, A., Ali, U., Khan, M. N., Sultana, S., **Hayat, K.**, Aziz, R., & Çetin, M. Light and Scanning Electron Microscopic Investigation of Selected Taxa of Fabaceae and its Utilization for Taxonomic Classification. *Journal of Xi'an Shiyou University*, 19(05), 262-272.

Hayat, K., Khan, W.M., Khan, M.N., Mabood, F., Amin, B., Shakir, U.U., Izhar, M., Wahab, S., Chandni, R., Khan, S. (2022). Impact of Salt Stress on selected cultivars of Wheat (*Triticum aestivum* L.) Under laboratory condition Bioscience Research, 19(4):1986-1992.

BOOK CHAPTERS

Hayat, K., Khan, M. N., Shah, S., Bangash, S, A, K., Ibrahim, M., & Kaplan, A. (2024) Biochar application and plant tolerance to waterlogging. In Latef, A, A, H, A (Eds.), *Biochar in Mitigating Abiotic Stress in Plants* (pp. 247-270). ELSEVIER. DOI: <https://doi.org/10.1016/B978-0-443-24137-6.00014-8>

Kaplan, A., Khan, M. N., **Hayat, K.**, Iqbal, M., Ali, B., Wahab, S., Wahid, N., & Kanwal. (2024). Coupling Environmental Factors and Climate Change: Impacts on Plant and Vegetation Growth Patterns in Ecologically Sensitive Regions. In S. Fahad, S. Saud, T. Nawaz, L. Gu, M. Ahmad, & R. Zhou (Eds.), *Environment, Climate, Plant and Vegetation Growth* (pp. 307-358). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-69417-2_11

Kaplan, A., Khan, M. N., Topkaya, H., Wahab, S., Iqbal, M., Wahid, N., ... & **Hayat, K.** (2024). FUTURE DEVELOPMENT OF THE PRODUCTION, APPLICATION AND TECHNOLOGY OF BIODIESEL FEEDSTOCKS, THE ECO-BENEOVALENT ALTERNATIVE FUEL OF THE FUTURE.

Kaplan, A., Khan, M. N., Iqbal, M., Wahab, S., Wahid, N., Ghazal, M., & **Hayat, K.** (2024). NANO-DRUG DELIVERY SYSTEMS BASED ON NATURAL PRODUCTS AND THEIR BIOAVAILABILITY IN BIOLOGICAL SYSTEMS.

REFERENCES

Dr. Wisal Muhammad Khan (Research Supervisor)

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Dr. Naveed Akhtar

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