

# **Prof. Dr. Ghulam Mujtaba Shah**

**Dean:** Faculty of Art & Humanities

**Chairman:** Department of Botany

Hazara University, Mansehra, Pakistan

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**Date of birth:** May 05, 1972; Mansehra – KPK, Pakistan



## **Professional Experience**

June 2020 – Present	<b>Professor</b> Department of Botany, Hazara University, Mansehra, Pakistan
2013 – 2020	<b>Associate Professor</b> Department of Botany, Hazara University, Mansehra, Pakistan
2018- 2021	<b>Head of Department</b> Department of Environmental Sciences, Hazara University, Mansehra
2014-2018	<b>Chairman</b> Department of Bioinformatics, Hazara University, Mansehra
2004-2013	<b>Assistant Professor</b> Higher Education, Higher Education Department, Government of KPK
1998-2004	<b>Lecturer</b> Higher Education, Higher Education Department, Government of KPK

## **Administrative Experience**

- Dean, Faculty of Art & Humanities
- Focal Person, faculty of Art & Humanities
- Focal Person, faculty of Health and Biological Sciences
- Chairman, Department of Botany (2020 to date).
- Head, Department, Department of Environmental Sciences (2018 – 2020).
- Head, Department, Department of Geology
- Chairman, Department of Bioinformatics (2014 - 2018).
- Project Director (PD), Department of Environmental Sciences (2018 to 2020).
- Project Director (PD), Department of Geology (2018 to 2021).
- Head, Department of Microbiology (2018-2019).
- Focal Person, Department of Pharmacy (2022).
- Director ORIC (2022).

### **Member University Statutory Body**

- Member ASRB council
- Member Academic council
- Member Senate
- Member BOS, Department of Botany

### **Academic Qualifications**

2007	<b>PhD Botany (Spec: Plant Taxonomy)</b> Quaid-I-Azam University, Islamabad, Pakistan <i>Dissertation: "Plant and plant resources of Siran Valley, Mansehra, KPK, Pakistan"</i>
1998	<b>M.Phil Botany (Spec: Plant Physiology)</b> University of Agriculture, Faisalabad, Pakistan <i>Dissertation: "Screening of Wheat (<i>Triticum aestivum L.</i>) accession against drought"</i>
1994	<b>MSc Botany</b> University of Peshawar, Pakistan
1992	<b>BSc Botany</b> University of Peshawar, Pakistan
1988	<b>FSc Pre Medical</b> Federal Board of Intermediated and Secondary Education, Islamabad, Pakistan
1986	<b>SSC Science</b> Peshawar Board of Intermediate and Secondary Education, Peshawar, Pakistan

### **Courses Taught**

- Phytogeography of Pakistan
- Advanced Ethnobotany
- Pharmacognosy
- Biodiversity and Genetic Resources
- Environmental Biology
- Palynology
- Agriculture Botany
- Research Methodology

**Total Length of service:** 26 years

**Total Administrative Experience:** 10 years

**Number of Publications:** 255

**Number of MPhil Produced:** 60

**Number of PhD Produced:** 11

**Journal Publications:** (IF = 150)

**Citation:** 2,251

**Journal Publications (IF = 100.692)**

## 2024.

1. Hussain, U., Afza, R., Gul, I., Sajad, M. A., **Shah, G. M.**, Muhammad, Z., & Khan, S. M. 2024. Phytoremediation of heavy metals spiked soil by Celosia argentea L.: effect on plant growth and metal stabilization. *Environmental Science and Pollution*
2. Rehman, S., Iqbal, Z., Qureshi, R., **Shah, G. M.**, Afzal, A., Rahman, K. U., Shah, S. S. H. 2024. Quantitative ethnomedicinal survey of wild edible fruits used by the indigenous community in North Waziristan, Khyber Pakhtunkhwa, Pakistan. *Ethnobotany Research and Applications*, 28, 1-20.
3. Hussain, M., Alam, J., **Shah, G. M.**, Gul, A., Majid, A., Shafqat, N., & Khan, S. M. R. 2024. Assessment of traditional knowledge of medicinal plants practiced by rural communities residing around Musk Deer National Park, Kashmir Himalaya, Pakistan. *Ethnobotany Research and Applications*, 28, 1-23.
4. Ullah, K., **Shah, G.M.**, Alam, J., Gul, A., Omran, A., Faridi, U., El Sabagh, A. 2024. Ethnopharmacological And Phytochemical Assessment of Medicinal Plants Used Against Livestock Infections by Tribal Community Under Semi-Arid Conditions. *Applied Ecology and Environmental Research*, 22(1), 881-900.
5. Hadi, F., Kılıç, O., Ullah, S., Gul, A., Shah, G. M., Noreen, S., & Bussmann, R. W. (2024). Indigenous utilization of medicinal plants in Kalasha tribes, District Chitral, Hindukush Range, Pakistan. *Ethnobotany Research and Applications*, 27, 1-19.
6. Wahab, A., Muhammad, M., Ullah, S., Abdi, G., Shah, G. M., Zaman, W., & Ayaz, A. (2024). Agriculture and environmental management through nanotechnology: Eco-friendly nanomaterial synthesis for soil-plant systems, food safety, and sustainability. *Science of the Total Environment*, 171862.
7. Shah, S. A., Gul, A., Shah, G. M., Shah, M., Iqbal, S., & Mahmood, S. (2024). Phytochemical analyses and bioactivities of various solvents extracts of Onychium japonicum (Thunb.) Kunze and its greenly synthesized silver nanoparticles. *Inorganic Chemistry Communications*, 167, 112782.
8. Manzoor, M., Ahmad, M., Zafar, M., Gillani, S. W., Shah, G. M., Shaheen, H., ... & Khishlatovna, K. K. (2024). Exploration of traditional Ethno-gynaecological knowledge: advances to ethnobotanical studies from indigenous communities of Neelum Valley in the Himalayan Region. *Plant Science Today*, 11(sp1).
9. Shah, M. A., Faheem, H. I., Hamid, A., Yousaf, R., Haris, M., Saleem, U., ... & Silva, A. S. (2024). The entrancing role of dietary polyphenols against the most frequent aging-associated diseases. *Medicinal Research Reviews*, 44(1), 235-274.

## 2023.

10. Rahman, K. U., Fiaz, M., **Shah, G. M.**, Alam, J., Abbasi, S., & Shahid, M. (2023). Contributions of rust fungi and host plants from Thandiani region, Abbottabad,

Pakistan, *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(2): 334-1346.

11. Syed Ahsan shah\*, Alia Gul\*, **Ghulam Mujtaba Shah\***. Nadia Jabeen\*\*, Sumaira Salahuddin Lodhi\*\*\*, Shumaila Nourin\*\*\*\*, Nazia Shaheen\*, Adeel Yunus Tanoli,\*\*\* Ajmal Khan\*, Khursheed Ur Rahman\*, Asma. (2023). Antibacterial and phytochemical analyses of *Dryopteris stewartii* Fraser-Jenk. *Journal of Xi'an Shiyou University, Natural Science Edition*, 12(2): 67-82.
12. Iqbal, M., **Shah, G. M.**, Fiaz, M., & Rahman, K. U. (2023). In-vitro Phytochemical Screening and Biological activities of bark of *Quercus glauca*. *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(03): 359-375.
13. Abdur rahim khan\*, Muhammad Fiaz\*, Rahmat Ali khan\*\*, **Ghulam Mujtaba Shah\***, Khursheed Ur Rahman\*, Tariq Saif Ullah\*\*\*, Tariq Aziz \*\*, Janbaz khan \*. , Proteomics analysis of two wild mushrooms Phallus impudicus and Trametes versicolor improving human health. *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(02): 687-698.
14. Janbaz khan \*, Muhammad Fiaz\*, Rahmat Ali khan\*\*, **Ghulam Mujtaba Shah\***, Khursheed Ur Rahman\*, Tariq Saif Ullah\*\*\*, Abdur rahim khan\*, Waseem Jan khan \*\*\*\*,.ANTI-OXIDANT, IN-VITRO AND IN-VIVO ANTIDIABETIC POTENTIAL OF COPRINUS ATRIMENTERIA IN ALLOXAN INDUCED DIABETIC RATS. *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(03): 376-389.
15. Rahman, K. U., **Shah, G. M.**, Shah, M. A., Fiaz, M., Shahid, M., & Abbasi, S. (2023). PHARMACOGNOSTIC EVALUTION OF PIMPINELLA STEWARTII (NASIR.) APIACEAE: LEAVES. *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(05): 756-767.
16. Rahman, K. U., Shah, G. M., Shah, M. A., Fiaz, M., Ullah, A., & Abbasi, S. (2023). PHARMACOGNOSTIC EVALUTION OF PIMPINELLA STEWARTII (NASIR.) APIACEAE: LEAVES. *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(5): 756-768.

#### 2022.

1. Rahman, K. U., **Shah, G. M.**, Shah, M. A., Fiaz, M., Ahmad, M., Sajid, M., & Abbasi, S. (2022). Antimicrobial, Cytotoxic and Phytochemical analysis of *Otostegia limbata* Leaves ethanolic extract againt oral pathogens. *Journal of Xi'an Shiyou University, Natural Science Edition*, 18(12): 76-94.
2. Rahman, K. U., **Shah, G. M.**, Shah, M. A., Fiaz, M., Shahid, M., & Abbasi, S. (2022). Pharmacognostic investigation of the leaves of *Otostegia limbata* (Lamiaceae). *Journal of Xi'an Shiyou University, Natural Science Edition*, 18(12): 1288-1301.

3. Rahman, K. U., **Shah, G. M.**, Shah, M. A., Ikram, M., Fiaz, M., Zehra, N., & Shah, (2023). A. In Vivo Analgesic and Anti-Inflammatory Activities of the ethanolic extract from *Otostegia limbata* Leaves through Classic Models in Mice and Rats. *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(1): 864-876.
4. Rahman, K. U., **Shah, G. M.**, & Shah, M. A. Documentation of Medicinal Plants used to cure dental diseases in Hazara Division, Khyber Pakhtunkhwa, Pakistan-An ethnopharmacology approach. *Journal of Xi'an Shiyou University, Natural Science Edition*, 19(1): 804-817.
5. Firdous, S., Ur Rahman, K., Basit, A., Qadir, G., & Ali, H. (2022). Taxonomic study of Family Papilionaceae from ShishiKoh Valley, District Chitral, Pakistan. *Journal of Xi'an Shiyou University, Natural Science Edition*, 18(10): 92-98.
6. Abbasi, S., **Shah, G. M.**, Alam, J., Fiaz, M., Majid, A., Rahman, K. U., & Shezadi, I. (2022). In-Vitro Phytochemical analysis, Antimicrobial, Antioxidant and Cytotoxic activity of *Carpesium abrotanoides*, *Journal of Xi'an Shiyou University, Natural Science Edition*, 18(10): 1302-1320.
7. Shahid, M., Hussain, M., **Shah, G. M.**, Rahman, K. U., Ullah, A., & Abbasi, S. (2022). Preliminary Study of the Phytochemical analysis, Antimicrobial, Antioxidant and Cytotoxic activity of *Cirsium swaticum*, *Journal of Xi'an Shiyou University, Natural Science Edition*, 18(10): 1321-1339.
8. Haq, M. N. U., Shah, G. M., Gul, A., Foudah, A. I., Alqarni, M. H., Yusufoglu, H. S., ... & Khan, R. A. (2022). Biogenic synthesis of silver nanoparticles using phagnalon niveum and its in vivo anti-diabetic effect against alloxan-induced diabetic wistar rats. *Nanomaterials*, 12(5).

## 2021

1. Gul, I., Manzoor, M., Hashim, N., Shah, G. M., Waani, S. P. T., Shahid, M., ... & Arshad, M. (2021). Challenges in microbially and chelate-assisted phytoextraction of cadmium and lead—A review. *Environmental Pollution*, 117667.
2. Jadoon, W. A., Abdel-Dayem, S. M. M. A., Saqib, Z., Takeda, K., Sakugawa, H., Hussain, M., **Shah, G.M.**, Syed, J. H. (2021). Heavy metals in urban dusts from Alexandria and Kafr El-Sheikh, Egypt: implications for human health. *Environmental Science and Pollution Research*, 28(2), 2007-2018.
3. Shoaib, G., **Shah, G. M.**, Shad, N., Dogan, Y., Siddique, Z., Shah, A. H., ... & Nedelcheva, A. (2021). Traditional practices of the ethnoveterinary plants in the Kaghan Valley, Western Himalayas-Pakistan. *Revista de Biología Tropical*, 69(1).
4. Zainab, R., **Shah, G. M.**, Khan, W., Mehmood, A., Azad, R., Shahzad, K., ... & Chung, G. (2021). Efficiency of plant growth promoting bacteria for growth and yield enhancement of maize (*Zea mays*) isolated from rock phosphate reserve area Hazara Khyber Pakhtunkhwa, Pakistan. *Saudi Journal of Biological Sciences*.

5. Khalil, S., Mahnashi, M. H., Hussain, M., Zafar, N., Khan, F. S., Afzal, U., ... & Irfan, M. (2021). Exploration and Determination of Algal Role as Bioindicator to Evaluate Water Quality—Probing Fresh Water Algae. *Saudi Journal of Biological Sciences*.
6. Zafar, M., Ahmad, M., Shah, G. M., Khan, A. M., Kilic, O., Yilmaz, E., ... & Ahmad, S. (2021). Application and implication of scanning electron microscopy for evaluation of palyno-morphological features of Vitaceae from Pakistan. *Microscopy Research and Technique*, 84(4), 608-617.

## 2020

1. Rahman, I., Afzal, A., Iqbal, Z., Bussmann, R.W., Alsamadany, H., Calixto, E.S., **Shah, G.M.**, Kausar, R., Shah, M., Ali, N., Ijaz, F. (2020). Ecological gradients hosting plant communities in Himalayan subalpine pastures: Application of multivariate approaches to identify indicator species, *Ecological Informatics* (2.52).
2. Shoukat, A., Khan, M.F., **Shah, G.M.**, Tabassam, S., Sajid, M., Siddique, H., Badshah, K.D. and Ullah, I., (2020). Indigenous knowledge of zootherapeutic use among the people of Hazara division Khyber-Pakhtunkhwa, Pakistan.
3. Zafar, M., Ahmad, M., **Shah, G. M.**, Khan, A. M., Kilic, O., Yilmaz, E., ... & Ahmad, S. (2020). Application and implication of scanning electron microscopy for evaluation of palyno-morphological features of Vitaceae from Pakistan. *Microscopy Research and Technique*.
4. Bibi, H., Hussain, M., Jan, G., **Shah, G. M.**, Khan, S., & Ullah, I. (2020). Phytochemical analysis and antimicrobial activities of Kochia indica (Wight), plant growing in District Karak Khyber Puhktunkhuwa, Pakistan. *Pure and Applied Biology*. Vol. 10, Issue 3, pp789-796.

## 2019

7. Amber K., K.R. Khan, A.H. Shah, M.F. Lodhi, M. Hussain, **G.M. Shah**. (2019) A comprehensive survey of floristic diversity evaluating the role of institutional gardening in conservation of plant biodiversity. *Int. J. of Biosci.* Vol. 14, No. 3, p. 325-339.
8. Imtiaz, N., Niazi, M.B.K., Fasim, F., Khan, B.A., Bano, S.A., **Shah, G.M.**, Badshah, M., Menaa, F. and Uzair, B., 2019. Fabrication of an Original Transparent PVA/Gelatin Hydrogel: In Vitro Antimicrobial Activity against Skin Pathogens. *International Journal of Polymer Science*.
9. Khan, K., Shah, G.M., Shah, A., Saqib, Z., Hussain, M. and Rahman, I.U., (2019) Elemental composition and heavy metals determination of some wetland plants of family polygonaceae.

## 2018

10. Saeed, S.H., Hussain, M., **Shah, G.M.**, Shirani, M., Ali, I. and Ahmad, I., (2018). Floristic Checklist of Datta, District Mansehra Khyber Pakhtunkhwa, Pakistan. *Sci.Int.(Lahore)*, Vol 30 (4),517-522.
11. Ullah, H., Khan, R., **Shah, G.M.**, Ahmad, M., Kilic, O., 2018. Ethnomedicinal,

Phytochemical and Nutritional Analysis of *Nelumbium nucifera* Gaertn Rhizome. MOJ Food Process Technol 6(3): 00154. DOI: 10.15406/mojfpt.2018.06.00154

12. Farooq, M., Hussain, M., Saqib, Z., Khan, K.R., Shah, A.H., Mehmood, A., Jabeen, S., **Shah, G.M.**, Anjum, W., 2018. An updated plant inventory and biological spectrum of Tracheophytes flora of upper Tanawal area on western borders of Lesser Himalaya. International Journal of Biosciences. Vol. 12, No. 3, p. 201-212.
13. Munir, A., Azam, S., Aslam, S., Mehmood, A., **Shah, G.M.**, Amjad, S., Younis, M. and Fazal, S., 2018. Computational design of small interfering RNAs and small hairpin RNAs to silence mutated P53 gene expressions. Informatics in Medicine Unlocked, 12, pp.1-5.
14. Munir, A., Malik, S.I., Aslam, S., Mehmood, A., Amjad, S., Malik, K.A., Younis, M., Shah, A.H. and **Shah, G.M.**, 2018. Medicinal Plants are Effective Inhibitors of Type I and II Diabetes. Pharmacophore, 9(5), pp.1-7.
15. Farooq, M., Hussain, M., Saqib, Z., Khan, K.R., Shah, A.H., **Shah, G.M.**, Gul, S., Anjum, W. and Sthanadar, A.A., 2018. Spatial distribution and correlation of important edaphic and climatic gradients in Tanawal area of Himalayas, Pakistan. Acta Ecologica Sinica. (In Press).
16. Uzair, B., Bano, A., Niazi, M.B.K., Khan, F., **Shah, G.M.**, Habiba, U., Khan, N.N. and Khan, B.A., 2018. In vitro antifungal activity of 9, 10-dihydrophenanthrene-2-carboxylic acid isolated from a marine bacterium: *Pseudomonas putida*. Pakistan journal of pharmaceutical sciences, 31(6 (Supplementary)), pp.2733-2736. (0.36)
17. Khan, M.F., Tabassam, S., **Shah, G.M.**, Noreen, S., Akhtar, N. and Akhtar, B., 2018. Length and weight relationships of five different fish species from northern areas of Pakistan. Journal of Applied Ichthyology, 34(5), pp.1263-1264. (0.774)
18. Khan, W., Khan, S.M., Ahmad, H., Alqarawi, A.A., **Shah, G.M.**, Hussain, M. and Abd\_Allah, E.F., 2018. Life forms, leaf size spectra, regeneration capacity and diversity of plant species grown in the Thandiani forests, district Abbottabad, Khyber Pakhtunkhwa, Pakistan. Saudi journal of biological sciences, 25(1), pp.94-100. (3.318)
19. Nawab, B., Alam, J., Ali, H., Hussain, M., **Shah, G.M.**, Ahmad, S., Shah, A.H., and Mehmood, A., (2018). Conservation status assessment of native vascular flora of Kalam Valley, Swat District, Northern Pakistan. International Journal of Biodiversity and Conservation.
20. Khan, K.R., Iqbal, Z., Alam, J., Farooq, M., Shah, A.H., Hussain, M., **Shah, G.M.**, and Ali, D., 2018. Comparative study on floristic diversity of protected and unprotected Forests of Sathan Gali, District Mansehra, KP, Pakistan. Acta Ecologica Sinica.
21. Kayani, S., Hussain, M., Ahmad, M., Zafar, M., Sultana, S., Butt, M.A., Ali, S., **Shah, G.M.**, and Mir, S., 2018. Scanning Electron Microscopy (SEM) and Light Microscopy (LM)-based Palyno-morphological views of Solanaceae in Western Himalaya. Microscopy Research and Technique. (1.078)
22. Kayani, S., Ahmad, M., Hussain, M., Zafar, M., Khan, M.A. and **Shah, G.M.**, 2017. Ethnotoxic Profile of Poisonous Plants of Kaghan Valley Western Himalayas Pakistan. JAPS: Journal of Animal & Plant Sciences, 27(1) (0.56)

## **2017**

23. Shoaib, G., **Shah, G.M.**, Hussain, M., Muhammad, S., Rehman, I.U., Khan, A. and Shah, M., 2017. Ethnomedicinal Plants and Traditional Knowledge of Some Phenorogams of Lower Kaghan Valley, District Mansehra, Pakistan. J. Appl. Environ. Biol. Sci, 7(5), pp.21-28.
24. Ullah, R., Ullah, Z., **Shah, G.M.**, Majeed, A. and Khan, Y., 2017. Faunal Diversity of Butterflies in Tehsil Shabqadar District Charsadda, Khyber Pakhtunkhwa, Pakistan. PSM Biological Research, 2(2), pp.56-62.
25. Khan, N., Chaudhary, M.F., Abbasi, A.M., Khan, S.A., Nazir, A., **Shah, G.M.**, 2017. Development of an Efficient Callus Derived Regeneration System for Garlic (*Allium sativum L.*) from Root Explant. J Plant Breed Agric. Vol.1 No.1:3
26. Ullah, Z., **Shah, G.M.**, Muhammad, S., Muhammad, Z., Ullah, R. and Majeed, A., Ethnoveterinary plants used for animal cure in District Charsadda, Khyber Pakhtunkhwa (Pakistan). Science Arena Publications Specialty Journal of Biological Sciences. Vol, 3 (4): 1-19.
27. Jamal, Z., Pervez, A., Hussain, M., **Shah, G.M.**, Shah, S.H. and Ahmed, M., 2017. Ethnomedicinal Plants used for Gastrointestinal Ailments by the Rural Communities of Kaghan Valley, Mansehra, Pakistan. J. Appl. Environ. Biol. Sci, 7(12), pp.41-48.

## **2016**

28. Siddique Z, Nisa S, **Shah GM** 2016. Ethno-Medicinal Inventory of Khanpur Reflecting Ancient Gandhara Civilization Pakhtunkhwa. International Research Journal of Biological Sciences, 5(7): 68-84.
29. Khan, Khalid Rasheed, Zafar IqbaL, Manzoor Hussain, Abbas Hussain Shah, **Ghulam Mujtaba Shah**, and Muhammad Farooq. 2016. Pioneer inventory of tracheophytes of Sathan Gali, district Mansehra, Khyber Pakhtunkhwa, Pakistan. Journal of Biodiversity and Environmental Sciences. Vol. 8, No. 6, p. 162-170
30. **Shah, G.M.**, and Munir A., 2016. In-silico Investigation of Anti-urolithiatic activity of selected Medicinal Plants of Pakistan. Merit Research Journal of Medicine and Medical Sciences. Vol 4(9):419-424
31. Zabeeh Ullah, Rafi Ullah, **Ghulam Mujtabah Shah**, Abdul Majeed, Manzoor Hussain, Hafeez Ullah. 2016. Ethnomedicinal plants of district charsadda Khyber Pakhtunkhwa, Pakistan. Journal of Biodiversity and Environmental Sciences. Vol. 9, No. 2, p. 254-264.
32. Zeeshan, S., Nisa, S., **Shah, G.M.**, Khan, A., Naz, A., Khan, S., Aurangzeb, N., Khan, S.M., Farid, A. and Mohiuddin, M., 2016. Exploration of floristic diversity of Khanpur valley, District Haripur, Khyber Pakhtunkhwa, Pakistan. Journal of Biodiversity and Environmental Sciences. Vol. 9, No. 3, pp. 57-72.
33. Zeeshan, S., Nisa, S., and **Shah G.M.**, 2016. Ethno-Medicinal inventory of Khanpur Valley and some archeological sites reflecting ancient Gandhara Civilization, District Haripur, Pakhtunkhwa, Pakistan. International Research Journal of Biological Sciences. Vol. 5(7), 68-84.

34. Munir, A., Azam, S., Manzoor, M., Mehmood, A., **Shah, M.G.**, Fazal S., 2016. In-silico epitope based vaccine an excellent solution against Marburg virus. *Journal of Innovations in Pharmaceutical and Biological Sciences*. Vol 3 (4), pp. 61-66.
35. Muhammad, S., Hussain, M., Rahman, I.U., **Shah, G.M.**, Ijaz, F. and Ullah, K., 2016. Indigenous medicinal usage of family Asteraceae in Sadda Lower Kurram Agency: A Case Study. *Asian J. Sci. & Technol*, Vol 7(12), pp.3998-4003.
36. Munir, A., Azam, S. and **Shah, G.M.**, 2016. Prevalence of hepatitis B virus and hepatitis C virus among inhabitants Of Hazara Division Pakistan. *International Journal of Biotechnology and Allied Fields*, 4(12), pp.421-431.
37. Gul, A., Alam, J., Ahmad, H., **Shah, G.M.**, Hussain, M., Dogan, Y., Rahman K., 2016. Traditional, medicinal and food uses of Pteridophytes of district Mansehra (Pakistan) and their some adjacent areas. *International Journal of Biosciences*. Vol. 9, No. 5, pp. 116-133.
38. Ijaz, F., Iqbal, Z., Rahman, I.U., Alam, J., Khan, S.M., **Shah, G.M.**, Khan, K. and Afzal, A., 2016. Investigation of traditional medicinal floral knowledge of Sarban Hills, Abbottabad, KP, Pakistan. *Journal of ethnopharmacology*, 179, pp.208-233. (2.76)

#### **2014**

39. **Shah, G.M.**, Abbasi, A.M., Khan, N., Guo, X., Khan, M.A., Hussain, M., Bibi, S., Nazir, A. and Tahir, A.A., 2014. Traditional uses of medicinal plants against malarial disease by the tribal communities of Lesser Himalayas–Pakistan. *Journal of ethnopharmacology*, 155(1), pp.450-462. (2.69)
40. Khan, N., Abbasi, A.M., Dastagir, G., Nazir, A., Shah, **G.M.**, **Shah, M.M.** and Shah, M.H., 2014. Ethnobotanical and antimicrobial study of some selected medicinal plants used in Khyber Pakhtunkhwa (KPK) as a potential source to cure infectious diseases. *BMC complementary and alternative medicine*, 14(1), p.122. (2.08)

#### **2013**

41. **Shah, G.M.**, Jamal, Z., and Hussain, M., 2013. Phytotherapy among the rural women of district Abbotabad. *Pak J Bot*, 45, pp.253-61. (1.2)

#### **2012**

42. Jamal, Z., Ahmad, M., Zafar, M., Sultana, S., Khan, M.A., and **Shah, G.M.**, 2012. Medicinal plants used in traditional folk recipes by the local communities of Kaghan valley, Mansehra, Pakistan. *Indian Journal of Traditional Knowledge*, 11(4): 634-639. (0.492)
43. **Shah, G.M.**, Ahmad, M., Arshad, M., Khan, M.A., Zafar, M. and Sultana, S., 2012. Ethno-phyto-veterinary medicines in northern Pakistan. *The Journal of Animal and Plant Sciences*, 22, pp. 791-797. (0.56)
44. Khan, K.Y., Khan, M.A., Niamat, R., **Shah, G.M.**, Fazal, H., Seema, N., Hussain, I., Ahmad, I., Inayat, H., Jan, G. and Kanwal, F., 2012. Elemental content of some anti-diabetic ethnomedicinal species of genus Ficus Linn. using atomic absorption spectrophotometry technique. *Journal of Medicinal Plants Research*, 6(11), pp. 2136-2140. (0.869)
45. Saeed, H., **Shah G.M.**, et al. 2012. Ethnobotanical Studies and Conservation Status of Trees

of District Abbottabad, Pakistan. *Pakistan Journal of Botany*. (0.69)

46. **Shah, G.M.**, Ahmad, M., Arshad, M., Khan, M.A., Zafar, M., and Sultana, S., 2012. Ethno-Phyto-Veterinary Medicines in Northern Pakistan. *The Journal of Animal & Plant Sciences*, 22(3): 791-797. (0.6)
47. Ahmad, M., Zafar, M., Khan, M.A., Sultana, S., **Shah, G.M.**, and Jan, G., 2012. Ethnomedicinal Investigation of Phytomedicines among the local communities of Arid areas of Pakistan. *Indian Journal of Traditional Knowledge*. 11 (3), pp. 436-446 (0.492)

## **2011**

48. Khan, K.Y., Khan, M.A., Ahmad, M., **Shah, G.M.**, Zafar, M., Niamat, R., Munir, M., Abbasi, A.M., Fazal, H. and Mazari, P., 2011. Foliar epidermal anatomy of some ethnobotanically important species of genus *Ficus* Linn. *Journal of Medicinal Plants Research*, 5(9), pp.1627-1638. (0.869)
49. Khan, K.Y., Khan, M.A., **Shah, G.M.**, Ahmad, M., Munir, M., Hussain, I., Fazal, H., Mazari, P., Ali, B., Seema, N. and Bokhari, S.H., 2011. Palynomorphological characterization of some species of *Ficus* L. from Pakistan. *Journal of Medicinal Plants Research*, 5(20), pp. 5058-5066. (0.869)
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51. Khan, K.Y., Khan, M.A., Ahmad, M., **Shah, G.M.**, Zafar, M., Niamat, R., Munir, M., Abbasi, A.M., Fazal, H., and Mazari, P., 2011. Foliar epidermal anatomy of some ethnobotanically important species of genus *Ficus* Linn. *Journal of Medicinal Plants Research*, 5(9), pp. 1627-1638. (0.869)
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## **2010**

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## **2007**

59. Munsif, S., Khan, M.A., Ahmad, M., Zafar, M., **Shah, G.M.** and Yasmin, G., 2007. Comparative pollen studies of the genera Lantana, Verbena and Vitex of family Verbenaceae from Pakistan. International Journal of Agriculture & Biology, 9, pp.545-549. (0.93)
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61. Aftab, A.K., Shah, M.M., Gul, Z., and **Shah, G.M.**, 2007. Phytomedicinal Study on selected Herbs in the Lower Terran of Thandiani Region in Abbottabad District. Second International Conference on Environmentally Sustainable Development, 26-28 August 2007. COMSATS Institute of Information Technology, Abbottabad.
62. **Shah, G.M.**, Khan, M.A., Hussain, M., and Jamal, Z., 2007. An Ethnobotanical Note on Fuel Wood and Timber Plant Species of Siran Valley. Pakistan. Journal of Biological Sciences, 7(2): 349-353.

## **2006**

63. Hussain, M., Shah, M., Jan, S., Murad, W., **Shah, G.M.**, Bibi, N., 2006. Vegetation analysis of Machiara National Park, Azad Jammu and Kashmir (AJK). Scientific Khyber 19, 79-87
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65. Hussain, M., Murad, W., Jan, S., **Shah, G.M.**, Jamal, Z., and Bibi, N., 2006. Palynological and Ethnobotanical Studies of *Alnus nitida* (Betulaceae) from Kaghan Valley, N.W.F.P, Pakistan. Scientific Khyber. 19 (2): 133-136.
66. **Shah, G.M** and Khan M.A., 2006. Check List of Noxious Weeds of District Mansehra, Pakistan. Pak. J. Weed Sci. Res .12(3): 213-219.
67. **Shah, G.M** and Khan M.A., 2006. Ethnobotanical studies on Fodder and Honey-Bee Flora of Siran Valley, Mansehra, Pakistan. Scientific Khyber. 19(2): 151-163.
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69. **Shah, G.M.** and Khan, M.A., 2006. Common medicinal folk recipes of siran valley, Mansehra, Pakistan. Ethnobotanical leaflets, 2006(1), p.5.
70. **Shah, G.M.** and Khan M.A., 2006. Check List of Medicinal Plants of Siran Valley Mansehra-Pakistan. Ethnobotanical Leaflets, 10: 63-71.

## **Book Chapters**

1. Bakht, B.K., Iftikhar, M., Gul, I., Ali, M.A., **Shah, G.M.**, Arshad, M. (2020). Effect of nanoparticles on crop growth. In: Nanomaterial for Soil Remediation. Abdeltif Amrane Dinesh Mohan Tuan Anh Nguyen Aymen Amine Assadi Ghulam Yasin (ed). Elsevier ISBN 9780128228913.
2. Gul, I., Ahmad, I., **Shah, G.M.** Phytoremediation of Radioactive Contaminated Site; in, Bioremediation and Phytoremediation for Sustainable Soil Management, Springer (accepted)
3. Pieroni, A., Pawera, L. and **Shah, G.M.**, 2016. Gastronomic ethnobiology. In Introduction to ethnobiology (pp. 53-62). Springer, Cham.
4. **Shah, G.M.**, Hussain, M. and Abbasi, A.M., 2015. Medicinal Plants Used to Treat Respiratory Tract Illness in Kaghan Valley, Himalayan Region-Pakistan. SMGE book, p.5.

## **Books**

1. **Shah, G. M.**, M. A. Khan, M. Ahmad and M. Zafar. 2011. Plants and Plant Resources of Siran Valley, Mansehra, NWFP, Pakistan. Ethnobotany and conservation. VDM Publisher (VDM) Germany & USA
2. Humaira.S., **G.M. Shah** and H. Ahmad. 2012. The genus *Ficus*. Systematics and medicinal uses of Ficus. VDM Publisher (VDM) Germany & USA.

## **Conferences Organized**

- Organized 1<sup>st</sup> webinar on “Research Strategies and Scientific Writing”
- Organized “Second National Conference on Emerging Trends in Bioinformatics and Biosciences” Department of Bioinformatics, Hazara University Mansehra Pakistan, August 9-11, 2018
- Organized “First National Conference on Emerging Trends in Bioinformatics and Biosciences” Department of Bioinformatics, Hazara University Mansehra Pakistan, July 21-23, 2017.

## **Projects**

1. PI: Establishment of Integrated solid waste management system at Hazara University, Mansehra. Hazara University.
2. Co-PI: Selection of multi-metals hyperaccumulator plants: effects of heavy metals on the uptake and tolerance. HEC, Pakistan.
3. Co-PI: Groundwater flow and solute transport in multi-layered aquifer aquitard system. HEC, Pakistan.

## **Trainings and Seminars**

- Professional course for staff development (Jan25 to Feb 09, 2005) at FEF Academy Kohat
- Training Course in Botany organized by HEC, The Learning Innovation Division (April 16-21,2006) at Hazara University, Mansehra
- Professional Development Course in Subject Specific Teaching and Evaluation Skills (May 10 -30,2007) at FEF Academy Kohat
- International Conference on Environmentally Sustainable Development (26-28 August 2007) at COMSATS Institute of Information Technology, Abbottabad
- Master Trainers Workshop on Testing and Assessment organizes by HEC, The Learning Innovation Division (June 7-11,2011) at COMSATS Institute of Information Technology, Abbottabad
- Training of Trainers in Plant Biodiversity organized by HEC Islamabad (November 23-25, 2006) at University of Peshawar Botanical Garden
- Conference: First International Symposium on The Himalayas of Pakistan: Resources and Conservation Issues (27-30 November 2014) at Hazara University, Mansehra
- Second National Conference on the Title: Emerging Trends in Bioinformatics and Biosciences (09-11 August 2018) at Hazara University, Mansehra
- Department of Bioinformatics, Hazara University Mansehra, Pakistan. 4th INTERNATIONAL CONFERENCE ON EMERGING TRENDS IN BIOINFORMATICS & BIOSCIENCE (ICETBB-2022)
- Center of Biodiversity & Botanical Garden University of Peshawar. The National Conference Biodiversity, Climate Change and Carbon Sequestration Baragali Summer Campus (June 21-23, 2022) Write here the description.
- Herbarium Hazara University Pakistan & Utah State University , USA FIRST MEETING OF HERBARIUM LEADERS held on October 24,2022
- Department of Botany, Hazara University Pakistan. ONE DAY SYMPOSIUM ON THE ROLE OF GEOSPATIAL TECHNOLOGY IN EDUCATION
- Department of Botany, Hazara University Pakistan. ONE DAY WORKSHOP ON DEVELOPMENT OF DIGITAL HERBARIA: A

## STEP TO STRENGTHEN INSTITUTIONAL CAPACITY IN BIODIVERSITY DATA MOBILIZATION

- Center of Plant Biodiversity, University of Peshawar.  
10<sup>TH</sup> NATIONAL CONFERENCE IMPACT OF CLIMATE CHANGE ON BIODIVERSITY, WATER AND NATURAL RESOURCES
- Department of Botany, Hazara University Pakistan.  
ONE DAY SEMINAR ON APPLICATION OF GEOGRAPHIC INFORMATION SYSTEM IN BOTANICAL SCIENCES
- Department of Agriculture, Hazara University Pakistan.  
INTERNATIONAL CONFERENCE ON SUSTAINABLE AGRICULTURE AND GENETIC RESOURCES

### **Certificates and Courses**

- Certificate of Service by the National Cadet Corps.
- Research Certificate by Pakistan Medical Research Council.
- Certificate of Honor in Co-Curricular Activities.
- Professional Course for Staff Development by FEF Academy Kohat.
- Certificate of Merit by Post Graduate College Abbottabad.
- Certificate of Achievements by FEF Academy Kohat.
- Certificate of Social Work Programme by University of Peshawar.
- Certificate of Training of Trainers in Plant Biodiversity by Higher Education Commission and the University of Peshawar Botanical Garden Workshop.
- Certificate of Training Course in Botany Awarded by HEC Islamabad.

### **Memberships and Professional Affiliations**

- Member Academic Council Hazara University
- Member Senate Hazara University
- Incharge Herbarium, Department of Botany
- Member Admission Committee.
- Covener Purchase Committee
- Covener of Discipline committee
- Member Curriculum Review Committee Hazara University
- Member and Board of Studies, Department of Botany Hazara University
- Member Emergency Committee Hazara University
- Member Environmental Club Hazara University
- Member WWF Pakistan

## **Research Interests and Skills**

- Ethnobotany
- Ethnomedicines
- Medicinal plant biodiversity
- Plant Ecology
- Plant Taxonomy and Conservation
- Nutritional assessment
- Pharmacognosy
- Phytoremediation

## **Research Supervision**

### **Ph.D Botany Students – Completed**

1. **Muhammad Nisar Ul Haq**, (Green synthesis of Silver nanoparticles from *Phagnalon niveum* Edgav and *Teverniera couneifolia* (Roth) Arnott and its biological activities).
2. **Khalid Khan**, Floristic diversity, Distribution Pattern and Ethnobotany of Wetland Plants of Mardan Division, Pakistan.
3. **Kifayat Ullah**, Floral diversity, Ethnobotany and Conservation Issues of the ShishiKoh Valley, District Chitral, Pakistan.
4. **Rimsha Zainab**, Characterion and Evaluation of Rhizobacteria from Phosphate Reserves of Hazara Pakistan.
5. **Khursheed Ur Rahman**, Pharmacognostic study and biological activities of selected ethnomedicinal plant species for their potential use in dental problems.
6. **Umar Nawaz Khan**, Development of heterogeneous nano catalyst for the production of biodiesel from novel plant seed oil.
7. **Syed Sidra Hussan Saeed**, Studiews on Phytoextraction, Physiology and genetic experision of hydrocotyle *umbellata* L. under selected havey metals exposure.
8. **Ahsan Shah**, Bioactivities and Pharmacognostic study of selected Medicinal Pteridophytes of Hazara Division.
9. **Tufial Shakeel**, Phytoremediation potential of selected plants species from heavy metal contaminated mining sites of Abbottabad.
10. **Mustajab Ahmed**, Population Distribution and vegetation structure of oak (*Quercus* species) with associated plants species in different ecological zones oh Himalaya of Hazara Division Pakistan.
11. **Zain Ul Abdin**, Assessment of algal diversity based on morpho-anatomical characterization and water quality parameter of Dor River, Hazara Pakistan.

### **MS/M.Phil Botany Students – Completed**

1. **Khateen Ullah**, Diversity and distribution pattern of vascular lithophytes and chasmophytes in upper Tanawal district Mansehra, Department of Botany, Hazara University Mansehra, 2021.
2. **Awais Hussain**, Quantitative ethnobotanical study of upper Tanawal, district Mansehra, Department of Botany, Hazara University Mansehra, 2021.
3. **Khudija Sardar**, Isolation and identification of most prevailing fungal diseases of wheat and maize crops in tehsil Haveliasn, district Abbottabad, Department of Botany, Hazara University Mansehra, 202.
4. **Tufail Muhammad**, Pharmacognostic studies of leaves of *Myrtus communis* L. from district Kohistan, Khyber Pakhtunkhwa, Department of Botany, Hazara University Mansehra, 2020.
5. **Asif Ali**, Vascular plant diversity, ethnobotany and conservation issues of Saiful Malook National Park, Khyber Pakhtunkhwa, Department of Botany, Hazara University Mansehra, 2020.
6. **Shamsher Ali**, Floristic diversity and ethnobotanical studies of Suppat valley upper Kohistan, Khyber Pakhtunkhwa, Department of Botany, Hazara University Mansehra, 2020.
7. **Syed Hassan Raza Naqvi**, Intra-Specific Genetic Variability among *CYAMOPSIS TETRAGONOLOBA* L. Germplasm Assayed through Morphological and Biochemical Markers, Department of Botany, Hazara University Mansehra, 2018
8. **Lubna Shaheen**, Phytochemical Screening, Phenolic Compounds and Antioxidant Activity of *FUMARIA INDICA* L. from District Haripur, Department of Botany, Hazara University Mansehra, 2018
9. **Zabeeh Ullah**, Floristic and Physico-Chemical Analysis of Wetlands of District Charsadda, KPK, Pakistan, Hazara University, 2017 -2018
10. **Zahidullah**, Pharmacognostic Study of Ainsliaea Aptera D.C. from Ayubia National Park, District Abbottabad, Pakistan, Hazara University, 2017 -2018
11. **Syeda Hajira Naqvi**, Biological Activities and Characterization of Silver Particles from *Prunus Persica* (L.) Batsch from Muzaffarabad, Azad Jammu and Kashmir, Pakistan, Hazara University, 2017 -2018
12. **Kashif Zubair**, Pharmacognostic Studies of Endemic *Lavatera Cachemiriana* Camb. var. Harooni s. Abedin Collected from Nathiagali, Hazara University, 2016 -2017
13. **Ayesha Bashir**, Comparative Taxonomic and Pharmacogenetic Study of *Swertia Ciliata* (G. Don) B.L. Burtt and *Swertia Cordata* (G. Don) Clarke, Department of Botany, Hazara University Mansehra, 2016
14. **Aqsa Tariq**, Ethnobotanical Studies on Selected Plants of District Abbottabad,

15. **Fouzia Bibi**, Aquatic and Semi-aquatic Plants of Abbottabad. Hazara University, 2012 -2013
16. **Wajid-ur-Rehman**, Antimicrobial Activity of *Solanum arienthum* D. Don (Family Solanaceae). Hazara University, 2012 -2014
17. **Syed Abdul Majid Shah**, Antimicrobial Activity of *Daphne papyraceae* (Family Thymelaceae). Hazara University, 2012 -2014
18. **Saleha Ishfaq**, Palynological Studies of Genus *Cotoneaster* from Hazara Division, Hazara University, 2013 -2014
19. **Ayesha**, Ethnomedicinal Plants of Pakhal Plain District Mnasehra, Hazara University, 2015 -2016
20. **Sumaira Kousar**, Evaluation of Cultural Significance of Wild Food Botanicals traditionally consumed in Neelan Valley Tehsil Havellian, Hazara University, 2015 - 2016
21. **Mustajab Ahmed**, Ehnopharmacological studies on medicinal plants used as antidiabetics in District Abbottabad, Hazara University, 2015 -2016
22. **Basharat Iqbal**, Ethnoveterinary studies of Medicinal Plants in Kaghan Valley, Mansehra Pakistan, Hazara University, 2015 -2016
23. **Shahid Nawaz**, Wild fruits and Vegetables of Kaghan Valley Mansehra Pakistan, Hazara University, 2015 -2016
24. **Naz Gul**, Floristic Diversity and ethnobotany of Lower Siarna River Catchment Area Mansehra, Hazara University, 2015 -2016
25. **Muhammad Azhar**, Genetic Diversity in Exotic safflower (*Charthamus Tinctorius* L.) Germplasm in Pakistan, Hazara University, 2015 -2016
26. **Hadayat Ullah**, Ethnomedicinal Phytochemical And Nutritional Analysis of *Nelumbium nuciferum* Gaertn Rhizome from Charsadda, Pakistan. Hazara University, 2015 -2016
27. **Shahid Nawaz**, Evaluation of cultural significance of wild fruits and vegetables consumed in Kaghan Valley, Pakistan, Hazara University, 2015 -2016
28. **Naqash Khan**, Bioinformatics Data Base to Screen Various Plants & Their compound for different Diseases, Hazara University, 2015 -2016
29. **Zabeeh Ullah**, Ethnobotanical plants of District Charsadda. Hazara University, 2013 -2014
30. **Naeem Ullah**, Florestic Diversity of Aquatic and semi-Aquatic plants of Distric Charsadda. Hazara University, 2013 -2014
31. **Saleha Ashfaq**, Taxonomic characterization and conservation status of Genus

cotoneaster from Hazara Division, Hazara University, 2013 -2014

32. **Naeemullah**, Floristic Diversity of Aquatic and Semi Aquatic Plants of District Charsadda, Hazara University, 2013 -2014
33. **Abdul Wahab**, Ethno medicinal Plants of Gadoon Amazi District Swabi KPK Pakistan, Hazara University, 2013 -2014
34. **Tashfin Iftikhar**, Medico-Ethnobotanical Profile of District Haripur (N.W.F.P) Pakistan, Hazara University, 2007-2009
35. **Zainab**, Ethnobotany and Phytosociology of weeds of wheat (*Triticum aestivum L.*) in District Abbottabad. Hazara University, 2008 -2010
36. **Anam Naz Akram**, Ethnomedicinal Plants of Tehsil Havelian, District Abbottabad, Hazara University, 2008 -2010
37. **Nayab Shafque**, Ethnobotanical Profile of Qalandarabad and its surrounding Villages, District Abbottabad. Hazara University, 2008 -2010
38. **Khizra Naseer**, Market Analysis and Ethnomedicinal uses of Crude Drugs of Muzaffarabad, AJK. Hazara University, 2009 -2011
39. **Ghazala Shoaib**, Ethnomedicinal Plants of Lower Kaghan Valley District Mansehra, Pakistan. Hazara University, 2009 -2011
40. **Khawaja Fatima Murad**, Market Analysis and Ethnomedicinal uses of Crude Drugs of Muzaffarabad, AJK. Hazara University, 2009 -2011
41. **Nadia Malik**, Ethnomedicinal Plants of Kalapani Area of Thandiani Forest Range of District Abbottabad. Hazara University, 2009 -2011
42. **Hina Abbasi**, Ethnomedicinal Plants of Abbottabad. Hazara University, 2009 -2011
43. **Naeema**, Ethnomedicinal Plants of North Waziristan Agency, Hazara University, 2009 -2011
44. **Waqas Khan**, Phytosociology and Geographical Distribution of Thandiani Forest. Hazara University, 2009 -2011
45. **Aiman Laraib Syed**, Pharmacognostic studies of Flaeaguns Angustifolia L. From Boi, District Abbottabad.
46. **Samina Saddque**, Effect of organic additives on regeneration and Micro Propogation of Anti Cancerous plant catharanthus.
47. **Mariyam Iqbal**, Phytochemical Screening and Biological Activities of Bark of *Quercus Glauca* Thunb. From Kaghan Velly Distict Mansehra.
48. **Ummama Khan**, Qualitative Phytochemical Profile Powder drug studies and Biological Activities of *Senecio chrysanthemoide* DC. From Shogran District Mansehra.
49. **Zohra Nasheen**, Assessment of Rust Resistance in introduced UK Wheat Lines

Across Two Contrasting Environment of Peshawar and Mansehra.

50. **Samia Abbasi**, Pharmacognostic Study of *Carpesium Abrotanoides* From District Abbottabad.
51. **Liaquat Ullah, 2022.** Assessment Of Collection And Distribution Patterns Of Monocot Flora From Northern Pakistan Using Herbarium Records Of Hazara University Herbarium .
52. **Hakim Ullah, 2022.** Mapping collection status of Asteraceae from northern pakistan based on herbarium data at hazara university pakistan,
53. **Haider Ali, 2022.** Cultural uses and conservation issues of flora of Tehsil Larjam District Dir upper, kp pakistan.
54. **Hira Javed, 2022.** Removal of iron from drinking water by using canabas sativa leaves as natural bio adsorbent.
55. **Asghar Ali, 2022.** Phytoremediation potential of some selected heavy metals using *catharanthus roseus*.
56. **Summan, 2022.** Studies on invitro biological activities of leaves, fruits and roots of *fragaria nubicola lacaita*.
57. **Aniqa Tanveer, 2022.** Studies on antioxidant potential and Biological activities of Leaves of *Cinnamomum Camphora* (L) From District Abbottabad.
58. **Arshia Kanwal**, Pharmacognostic study and Biological activities of *Inula Cappa* (HAM). DC. Leaves
59. **Muhammad Asif**, Ethnomedicinal Exploration of Sub alpine and alpine region of upper siran valley Mansehra.
60. **Aatika Javed**, Phytochemical, antimicrobial and cytotoxic activities of *salvia moorcroftiana* Wall. Ex Benth. From tehsil Balakot district Mansehra.

#### **MSc Botany Students – Completed**

1. **Muhammad Zia Khan**, Phytosociological Studies of the Plants of Kakul Hills and Catchment Areas of District Abbottabad, Govt. Postgraduate College No. 1 Abbottabad (affiliated with Hazara University Mansehra), 2013-2014.
2. **Waqar Ali**, Impacts of Tourism on Floral Diversity of Ayubia National Park District Abbottabad, Postgraduate College No. 1 Abbottabad (affiliated with Hazara University Mansehra), 2013-2014
3. **Iqra Baloch**, Pharmacognostic study and biological activities of *limonium cabulicum* Bioss. from sharghar district Mansehra, Pakistan
4. **Sani Begum**, Pharmacognostic study on Fruit bark of *Punica granatum* from district Battagram, Pakistan