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## CURRICULUM VITAE

### BIOGRAPHY

**Nick Name**

Haya

**Postal Address**

Department of  
Pharmacy, Shaheed  
Benazir Bhutto  
University, Sheringal,  
KP, Pakistan.

**Permanent address**

Village & P.O; Sangolai,  
District; Dir Lower,  
Tehsil; Balambat,  
Khyber Pakhtunkhwa,  
Pakistan

**Phone**

00923239594074

**Date of Birth**

April 1<sup>st</sup>, 1985

**Passport**

R3646642

**Nationality**

PAKISTAN

**Gender**

MALE

**Language Known**

English, Pashto, Urdu

**Hobbies**

Playing Cricket,  
Reading Books,  
Badminton, Hiking,  
Gym, etc.

**Dr. Haya Hussain**

(Ph.D., Pharmaceutical Chemistry)

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### 1. ACADEMIC QUALIFICATION

• **Ph.D. Pharmaceutical Chemistry/Neuropharmacology** (Neuropharmacological and Biochemical Approach Towards Antiamnesic Potential of Synthetic Curcumin Analogs) **2015-21**

Department of Pharmacy, Shaheed Benazir Bhutto University Sheringal, Dir (Upper), KPK, Pakistan.

• **MS/M.Phil. Pharmaceutical Sciences and Medicinal Chemistry** **2013-14**

Department of Pharmacy, University of Malakand (451-500 Asian University Ranking)

• **Pharm-D, Doctor of Pharmacy,** **2006-11**  
Department of Pharmacy, University of Malakand (451-500 Asian University Ranking)

### 2. RESEARCH INTERESTS

• **Organic Synthesis** (Synthesis of various classes of organic compounds i.e; Curcumin analogues, oximes, thiourea derivatives, Schiff bases etc)

• **Antioxidant activities of synthetic and natural products.** *In vitro* antioxidant assay, behavioral *in vivo* activities in animal models, tissues analysis for endogenous antioxidant enzymes e.g Catalase, superoxide dismutase, lipid peroxidase and glutathione).

• **Enzymes inhibition assays** (*in vitro* anti-cholinesterase assay, behavioral *in vivo* activities in animal models (Y-maze, LDB, NORT, OFT, Holeboard, FST and TST) to determine the learning and neuroprotective

potential of the various synthetic and natural products and evaluation of endogenous Acetyl cholinesterase.

- **Natural product research**

(Extraction, isolation, doses optimization).

- **Pharmacy Practices, Clinical Pharmacy researches**

(Undergrad Level and pre-clinical and clinical trials in post graduate level).

## 1. PROFESSIONAL EXPERIENCE (>11 Years)

2013-2025

- **Senior Lecturer**, Department of Pharmacy, Shaheed Benazir Bhutto University, Sheringal, Dir Upper KP, (Pakistan).

## 2. TAUGHT COURSES (at Ph.D./MS/Pharm-D/Diploma Level)

Involved in teaching at graduate level (MS, MPhil, Ph.D. level), undergraduate (Pharm-D) and Pharmacy Technician (Category-B) along with various co-curricular and research supervision activities.

- **Undergraduate Level (Pharm-D, Category B): Organic Chemistry**, Medicinal Chemistry, Pathology, Biochemistry and Pharmaceutics.
- **Graduate Level (MS/MPhil/Ph.D):** Concepts of drug design, Special topics in Organic Chemistry and Heterocyclic chemistry, CNS Pharmacology, Research Skills, Tools and Methodology.

## 3. RESEARCH EXPERIENCE

- **Department of Pharmacy, Shaheed Benazir Bhutto University Sheringal Dir (Upper), KPK, Pakistan (2015-2023)**

Six years as a PhD research student/assistant in the research group of Dr. Shujaat Ahmad Associate Professor and Dr. Syed Wadood Ali Shah Assistant Professor in Pharmaceutical Chemistry Lab (Synthesis, extraction, fractionation, isolation and pharmacological evaluation for new drug development).

Synthesis of various curcumin analogues along with natural products and screening them for in vitro cholinesterase inhibition assay, in vitro antioxidant assay, behavioral in vivo activities in animal models to determine the neuroprotective potential of these compounds, further tissues analysis for anti-cholinesterase activity and evaluation of endogenous antioxidant enzymes e.g

Catalase, superoxide dismutase, lipid peroxidase and glutathione). Published more than 25 publications in reputed journals.

- **Department of Pharmacy, University of Malakand, Chakdara, KP, Pakistan (2012-2014)**

Two years as MS/MPhil scholar in the research group of Dr. Mohammad Shoaib, Associate professor, Pharmaceutical sciences, University of Malakand (Pharmaceutical, Synthesis of thiourea derivatives and basic pharmacological activities).

#### **4. RESEARCH SKILLS/TECHNIQUES**

I have the following expertise and full-competency and confident over the following research skills, tools and techniques,

- **Synthesis and Characterization:** Synthesis of various classes of synthetic compounds e.g Curcumin analogues, thiourea derivatives, Schiff bases, chalcones and NMR, FTIR and Mass spectrometry etc.
- **Molecular Docking/Simulation:** Computer aided drug designing basic tools.
- **Animal Models/In vivo studies:** 1. Mice/Rats: Neuropharmacological studies (Scopolamine-induced memory impairment and lipopolysaccharide induced-memory impairment), behavioral models (NORT, Y-maze, EPM, LDB, open field test, hole board test, FST and TST), acetic acid induced-writhing test.
- 2. Rabbits: Ophthalmic, Diuretics, Skin and CNS
- 3. Dissections and surgery
- **H&E Staining/ Toxicology:** I can also perform histological studies like tissue perfusion, sectioning and H & E staining. Gastro/Hepato Protective toxicological, Cytotoxicity's, Hemolysis studies etc.
- **High throughput biological screenings:** Natural products/ essential oil, from collection to drying, extractions to fractionations, isolation to purifications and then their basic pharmacological and biological activities like antibacterial, antifungal, antioxidants (DPPH, H<sub>2</sub>O<sub>2</sub>, ABTS free radical scavenging), cytotoxicity's (potato disc anti-tumor, brine shrimps, angiogenesis and anti-

angiogenesis), Enzyme inhibitions (acetyl cholinesterase's and butyrl cholinesterase's etc), anthelmintic, insecticidal etc.

- **Rotary Evaporator, Thin layer Chromatography**
- **Statistical/Software Skills:** Can utilize statistical skills and software like Graph Pad Prism, SPSS, Statistics Software, Excel etc. to analyzed and evaluate various statistical results and descriptions.
- Can also use Mendeley/Endnote for Bibliography citations and literature review.
- **Graphical Expertise:** Expertise in Chem draw, ChemBiodraw/PPT, Graphical abstracts and images, Illustrations.
- **Pharmacy Practices/ Clinical Pharmacy:** Clinical trials with ethical concerns, research skill like drug prescription patterns, pharmacoeconomic evaluation, polypharmacy, rational and irrational use, medication management, self-medication, pharmaceutical care etc., also involved in supervision of students at undergrad level.

## 5. RESEARCH ACHIEVEMENTS

<b>Research/Review Articles (SCI/HEC-HJRS recognized)</b>	27
<b>Total Impact Factor</b>	53.053
<b>Research Supervisions/Co-Supervision</b>	
• Ph.D.	02
• MS/MPhil	05
• Pharm-D	38
<b>Conference's Organized/Co-Organized</b>	
• National	02
• International	02
<b>Work Shops</b>	
• Training on Biosafety and Biosecurity by Relief International at SBBU, Sheringal, Dir Upper. Aug 8-12, 2016.	01
• Biorisk Management Refresher Training Course at Microbiology Laboratory at Department of Pharmacy SBBU Sheringal Dir (Upper), December 20-21, 2021.	01
• National Outreach Program for Higher Education Faculty (NAHE) HEC, Islamabad in collaboration with Shaheed Benazir Bhutto University Sheringal, Dir Upper held at Shaheed BB University Sheringal Dir Upper, Pakistan December 16, 2024- January 03, 2025.	01

## 6. RESEARCH/REVIEW ARTICLES

S. No	Years	Publications	IF/Category
1	2024	Muhammad Ikram , Ismail Shah, <b>Haya Hussain</b> , Ehsan Ullah Mughal, Nafeesa Naeem, Amina Sadiq, Yasir Nazir, Syed Wadood Ali Shah, Muhammad Zahoor, Riaz Ullah, Essam A. Ali, Muhammad Naveed Umar. Synthesis, molecular docking evaluation for LOX and COX-2 inhibition and determination of in-vivo analgesic potentials of aurone derivatives. <i>Heliyon</i> 10 (2024) e29658.	4.0 (W)
2	2024	Muhammad Alamzeb, Syed Wadood Ali Shah, <b>Haya Hussain</b> , Muhammad Zahoor,* Shujaat Ahmad, Ehsan Ullah Mughal, Saeed Ahmad, Ihsan Ullah, Shahzeb Khan, Abid Ullah, Mehreen Ghias, Riaz Ullah, and Essam A. Ali. Beneficial Effects of Natural Alkaloids from <i>Berberis glaucocarpa</i> as Antidiabetic Agents: An <i>In Vitro</i> , <i>In Silico</i> , and <i>In Vivo</i> Approach. <i>ACS Omega</i> 2024, 9, 9813–9822.	4.1 (W)
3	2023	Hayat Bilal, Mubarak Ali Khan, Syed Wadood Ali Shah, Mehreen Ghias, <b>Haya Hussain</b> , Huma Ali, Mehboob Ur Rahman, Muhammad Zahoor, Riaz Ullah, Amal Alotaibi. Pre-Clinical Safety Profile and Behavioral Effects of <i>Helicteres isora</i> Linn in an Animal Model. <i>J. Biol. Regul. Homeost. Agents</i> . 2023; 37(11): 6231–6245.	2.843, X
4	2023	Ali S, Chen X, Ahmad S, Almeahmadi M, Alsaiari AA, Allahyani M, Gul Z, Ullah A, <b>Hussain H</b> , Li L, Chen X. Morphology-controllable Bimetallic Gold Nanostructures for Mercury Detection: Recent Developments, Challenges and Prospects. <i>Arabian Journal of Chemistry</i> . 2023 May 16:104997.	6.212, W
5	2023	Niaz, Ali.; Wajid, Ali.; Abid, Ullah.; Shujaat, Ahmad.; <b>Haya, Hussain</b> . Rusovastatin and simvastatin are vasorelaxant and potentiate antihypertensive effect of amlodipine predominantly through inhibition of voltage gated calcium channels. <i>Pakistan Journal of Pharmaceutical Sciences</i> , 2023, 36, 3(special).	0.8, Y
6	2023	Ahmad, M.; Khan, S.; Shah, S.M.H.; Zahoor, M.; Hussain, Z.; <b>Hussain, H.</b> ; Shah, S.W.A.; Ullah, R.; Alotaibi, A. Formulation and Optimization of Repaglinide Nanoparticles Using Microfluidics for Enhanced Bioavailability and Management of Diabetes. <i>Biomedicines</i> 2023, 11, 1064. <a href="https://doi.org/10.3390/biomedicines11041064">https://doi.org/10.3390/biomedicines11041064</a> .	4.7, W

- 7     **2023**   Ullah, A.; Ahmad, S.; Ali, N.; **Hussain, H.**; Allahyani, M.; Almehmadi, M.; Alsaiani, A.A.; Abdulaziz, O.; Almarshad, F.; Bukhari, S.H. The Effects of Moxifloxacin and Gemifloxacin on the ECG Morphology in Healthy Volunteers: A Phase 1 Randomized Clinical Trial. *Diagnostics* **2023**, *13*, 1234. **3.9, X**
- 8     **2023**   Haq, F.U.; Shoaib, M.; Ali Shah, S.W.; **Hussain, H.**; Zahoor, M.; Ullah, R.; Bari, A.; Alotaibi, A.; Hayat, M.F. Antidepressant Activities of Synthesized Benzodiazepine Analogues in Mice. *Brain Sci.* **2023**, *13*, 523. <https://doi.org/10.3390/brainsci13030523>. **3.3, X**
- 9     **2022**   **Hussain, H.**; Ahmad, S.; Shah, S.W.A.; Ullah, A.; Rahman, S.U.; Ahmad, M.; Almehmadi, M.; Abdulaziz, O.; Allahyani, M.; Alsaiani, A.A.; Halawi, M.; Alamer, E. Synthetic Mono-Carbonyl Curcumin Analogues Attenuate Oxidative Stress in Mouse Models. *Biomedicines* **2022**, *10*, 2597. **4.7, W**
- 10    **2022**   **Haya Hussain**, Shujaat Ahmad, Syed Wadood Ali Shah, Abid Ullah, Mazen Almehmadi, Osama Abdulaziz, Mamdouh Allahyani, Ahad Amer Alsaiani, Mustafa Halawi, Edrous Alamer. Investigation of Antistress and Antidepressant Activities of Synthetic Curcumin Analogues: Behavioral and Biomarker Approach. *Biomedicines* **2022**, *10*, 2385. **4.7, W**
- 11    **2022**   Afridi, H.H.; Shoaib, M.; Al-Joufi, F.A.; Shah, S.W.A.; **Hussain, H.**; Ullah, A.; Zahoor, M.; Mughal, E.U. Synthesis and Investigation of the Analgesic Potential of Enantiomerically Pure Schiff Bases: A Mechanistic Approach. *Molecules* **2022**, *27*, 5206. <https://doi.org/10.3390/molecules27165206>. **4.9, W**
- 12    **2022**   Abid Ullah, Shujaat Ahmad, Niaz Ali, Shafiq Ur Rahman, **Haya Hussain**, Saad Alghamdi, Mazen Almehmadi, Anas S. Dabool, Azzah M. Bannunah, Syeda Hajira Bukhari and Feras Almarshad. Insulinotropic Potential of Moxifloxacin and Gemifloxacin: An In Vivo Rabbits Model Study Followed by Randomized Phase I Clinical Trial. *Antibiotics*, **2022**, *11*: 148. **4.63, W**
- 13    **2022**   A. Ullaha, N. Ali, S. Ahmad, S. U. Rahman, S. Alghamdi, A. M. Bannunah, R. Ali, A. Aman, J. Khan, **H. Hussain**, M. U. K. Sahibzada. Glycogen synthase kinase-3 (GSK-3) a magic enzyme: it's role in diabetes mellitus and glucose homeostasis, interactions with fluroquionlones. A mini-review. *Brazilian Journal of Biology*, **2022**, *83*: 250179. **1.36, W**
- 14    **2022**   **Haya Hussain**, Shujaat Ahmad, Syed Wadood Ali Shah, Abid Ullah, Niaz Ali, Mazen Almehmadi, Manzoor Ahmad, Atif Ali Khan Khalil, Syed Babar Jamal, Hanif Ahmad and Mustafa Halawi. Attenuation of Scopolamine-Induced Amnesia via Cholinergic Modulation in Mice by Synthetic Curcumin Analogs. *Molecules*, **2022**, *27*(8): 1-18). **4.41, W**
- 15    **2022**   S. Ahmada, Zainab, H. Ahmad, I. Khan, S. Alghamdi, M. Almehmadi, M. Ali, A. Ullah, **H. Hussain**, N. M. Khan, F. Ali and **1.36, W**

M. Ahmad. Green synthesis of gold nanoparticles using Delphinium Chitralense tuber extracts, their characterization and enzyme inhibitory potential. Brazilian Journal of Biology, **2022**, 82, 257622.

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|----|-------------|---|----------------|
| 16 | <b>2021</b> | <b>Haya Hussain</b> , Shujaat Ahmad, Syed Wadood Ali Shah, Mehreen Ghias, Abid Ullah, Shafiq Ur Rahman, Zul Kamal, Farman Ali Khan, Nasir Mehmood Khan, Juma Muhammad, Mazen Almeahmadi, Osama Abdulaziz and Saad Alghamdi. Neuroprotective Potential of Synthetic Mono-Carbonyl mCurcumin Analogs Assessed by Molecular Docking Studies. <i>Molecules</i> , <b>2021</b> , 26(23): 1-15.        | <b>4.41, W</b> |
| 17 | <b>2021</b> | Abidullah, Shujaat Ahmad, Niaz Ali, Feras Almarshad, Muhammad Nabi, Shafiq Ur Rahman, Shakir Ullah, Jahangir Khan, <b>Haya Hussain</b> and Syeda Hajira Bukhari. Moxifloxacin and gemifloxacin mediates its antispasmodic profile via ATP-sensitive potassium channels: An in-vitro bioassay study. <i>Pakistan Journal of Pharmaceutical Sciences</i> , <b>2021</b> , 34(5)(Suppl), 1983-1988. | <b>0.8, Y</b>  |
| 18 | <b>2021</b> | <b>Haya Hussain</b> , Shujaat Ahmad, Syed Wadood Ali Shah, Niaz Ali, Abid Ullah, Asaf Khan, Shafiq Ur Rahman, Mehreen Ghias, Hamid Hussain, Zul Kamal, Shafiullah and Ziaul Islam. Potential role of synthetic curcumin analogs as antibacterial, antioxidant and anticancer agent. <i>Bioscience Research</i> , <b>2021</b> 18(2): 1082-1088.  | <b>Y</b>       |
| 19 | <b>2021</b> | Abid Ullah, Niaz Ali, Shujaat Ahmad, Sayed Wadood Ali Shah, <b>Haya Hussain</b> , Asaf Khan, Jahangir Khan, Shafiq Ur Rahman Zul Kamal and Hamid Hussain. <i>Moxifloxacin</i> hypoglycemic effect via interactions with glycogen synthase kinase-3 enzyme: A Molecular Dock based approach. <i>Bioscience Research</i> , <b>2021</b> 18(1): 749-753.  | <b>Y</b>       |
| 20 | <b>2021</b> | Hamid Hussain Afridi, Mohammad Shoaib, Syed Wadood Ali Shah, <b>Haya Hussain</b> , Shafiullah and Mehreen Ghias. <i>In vivo</i> analgesic potential of enantiomerically pure Schiff bases using animal model. <i>Bioscience Research</i> , <b>2021</b> 18(1): 685-694.  | <b>Y</b>       |
| 21 | <b>2019</b> | Abid Ullah, Fathullah, <b>Hussain H</b> , Ahmad S, Ahmad S, Wadood F. Antibiotic utilization in pediatric in-patients at a tertiary care unit. <i>Professional Med J</i> 2019; 26(7):1084-1089.   | <b>Y</b>       |
| 22 | <b>2017</b> | Shujaat Ahmad, Kifayatullah, Kiramat Ali Shah, <b>Haya Hussain</b> , Anwar Ul Haq, Abid Ullah, Asaf Khan, Najm Ur Rahman. <i>Bangladesh Journal of Medical Science</i> <b>2017</b> , 18(2): 222-227.  | <b>0.53, Y</b> |
| 23 | <b>2017</b> | <b>Hussain H</b> , Shah KA, Kifayatullah, Ahmed S, Khan A, Ullah A, et al. Assessment of prescription pattern and prescription errors using the World Health Organization drug use indicators in Lady Reading Hospital Peshawar, Pakistan: A retrospective study. <i>Khyber Med Univ J</i> <b>2017</b> ; 9(4): 181-184.   | <b>Y</b>       |
| 24 | <b>2017</b> | Mohammad Shoaib, <b>Haya Hussain</b> , Syed Wadood Ali Shah,  | <b>0.8, Y</b>  |

Mohammad Naveed Umar and Abid Ullah. Synthesis, acute toxicity, analgesic activity and cytotoxicity of Some bithiourea derivatives. Pak. J. Pharm. Sci. **2017**, 30(4), 1351-1356.

*\*Corresponding*

## 7. Patents

1	Organ Bath For Monitoring Animal Tissue Activity	Design number (UK) <b>6393796</b>
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## 8. CONFERENCE/SEMINARS/WORKSHOPS

S. No	Years	Conference/Seminar/Workshop Details	Invited/ Participate as
2	2023	International Conference on <b>Food and Applied Science (ICFAS-2023)</b> Dir-Kumrat, 03-05 Aug, 2023. Co-organizer, ORIC-SBBU	Co-Organizer/ Pakistan

**9. SOCIAL ACTIVITIES:** Member of various social organizations helping the community in hard times/flood relief operation/rescue operation/sports events like...

- Alkhidmat Foundation
- Social welfare organization
- Sports and entertainment organization
- Skill society

## 10. REFERANCES

- **Prof. Dr. Shujaat Ahmad**

Associate Professor, Department of Pharmacy, Shaheed Benazir Bhutto University, Sheringal, Pakistan, Email: [shujaat@sbbu.edu.pk](mailto:shujaat@sbbu.edu.pk)

- **Dr. Syed Wadood Ali Shah**

Associate Professor, Department of Pharmacy, University of Malakand at Chakdara, KPK, Pakistan, Email: [pharmacistsyed@gmail.com](mailto:pharmacistsyed@gmail.com)