

**Residence Address:**

**Dr. Muhammad Ayaz** Vill; Dramdal Talash, Post Office

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**Dr. Muhammad Ayaz**

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**Carrier Objectives:**

I am innovative and dynamic person, strong believe on the best and wish to excel in an institution with challenging environment, where I can continue my research work in Pharmaceutical sciences and then use it for the betterment of humanity.

**Personal Statement:**

I am a confident and enthusiastic person with the ability to learn and adapt quickly to new challenges and to handle difficult situations under pressure. I have an organized approach with good communication skills, which enables me to work effectively either on my own or as a part of the team.

**Academic & Professional Qualification:**

- 2013-16 PhD in Pharmaceutical Sciences, Department of Pharmacy, Faculty of Biological Sciences, University of Malakand, Pakistan (**PCD HEC No. 17688**).
- 2008-2009 M.Phil in Pharmaceutical Sciences, University of Peshawar, Pakistan (**PCD HEC No. 9522**).
- 2001-2005 Doctor of Pharmacy (Pharm-D) from University of Malakand with 1<sup>st</sup> Division (**Pharmacy Council of Pakistan Registration No: 1138-A/2007-PC**)
- 2000 “Intermediate in Science (Pre-Medical)” from BISE Swat with 1<sup>st</sup> Division.
- 1999 “Secondary School Certificate” from BISE Swat with 1<sup>st</sup> Division.

**Professional Links:**

**Citation, H-index and I10-index:** <https://scholar.google.nl/citations?user=5sfb9DkAAAAJ&hl=en>

**ORCID ID:** [orcid.org/0000-0002-4299-2445](https://orcid.org/0000-0002-4299-2445)

**Loop ID:** <http://loop.frontiersin.org/people/294513/overview>

**Mendeley:** <https://www.mendeley.com/profiles/muhammad-ayaz21>

**Current Impact Factor:** 350<sup>Plus</sup>

**Current Citations:** 2952

**H-index:** 32

**i10-index:** 62

### **Awards/Projects:**

- Gold Medalist of Pharmacy Department University Of Malakand for the session 2001-2005
- HEC Outstanding research Paper award 2017.
- NRPU HEC research project as Co-PI worth 8M PKR.
- Got outstanding reviewer certificate (2016) from Elsevier in recognition of services as best reviewer for Phytomedicine journal with high impact factor.
- Got outstanding reviewer certificate (2017) from Elsevier in recognition of services as best reviewer for Biomedicine and pharmacotherapy journal.
- Got outstanding reviewer certificate (2017) from Elsevier in recognition of services as best reviewer for King Saud University Journal-Science with high impact factor.
- Got outstanding reviewer certificate (2017) from Elsevier in recognition of services as best reviewer for Pharmacological Research journal with high impact factor.

### **Professional Experience:**

#### **Department of Pharmacy , University of Malakand, Pakistan.**

Position : Lecturer Pharmacy Department (Regular)  
Duration : 29 July 2013 to till date

#### **Department of Pharmacy , Kohat University of Science and Technology (KUST), Kohat, Pakistan.**

Position : Lecturer Pharmacy Department (Regular)  
Duration : December 1st, 2010 to 28 July 2013

#### **Northwest General Hospital and Research Centre Peshawar.**

Position : In charge OPD Pharmacy  
Duration : December, 2008 to June 2010

#### **Department of Pharmacy , University of Malakand, Pakistan.**

Position : Lecturer under NIP program  
Duration : Aug 2007 to July 2008.

#### **NovaMed Pharmaceuticals Lahore Pakistan.**

Position : Production pharmacist  
Duration : April 2, 2006 to May 5, 2007

#### **Task performed as lecturer.**

- Teaching and performing practical's of Pharmacology ,Clinical Pharmacy and Biopharmaceutics to undergraduate Pharmacy students.
- Co-Supervised M.Phil Students at Department of Chemistry KUST Kohat and University of Malakand.
- Supervising final years Pharm. D students for their clinical pharmacy projects.

#### **Tasks Performed as Hospital Pharmacist:**

- Dispensing and compounding of medicine according to prescription.
- Inventory control and keeping record of medicine in/out.

- To supervise the maintenance and requirements of medicine.
- Professional dealing with customer and advice for the Compliance of medicine dosage.

#### **Tasks performed as Production Pharmacist:**

- Developmental and supervision of trial batches of Tablets, Capsule, Syrup and Suspension.
- Supervision of 1<sup>st</sup> three commercial batches of new products and process improvement batches.
- Documentation of trial batches of developmental products and process improvement batches.
- Preparation of BMR of new and all existing commercial products.
- Directly involved in the validation of new products.
- Monitor and control inventory of raw material for new products.
- Maintain peace and harmony through understanding, cooperation, and communication and conduct dialogues with relevant department's personals to achieve productivity & profitability.

#### **Projects and Professional trainings:**

- Evaluation of antidepressants on bacterial resistance to antibiotics (M.Phil Project).
- Phytochemical studies, Evaluations of anti-Alzheimer and anti-cancer potentials of Polygonum hydropiper L. (PhD Project).
- Rational use of anti-asthmatic drugs in teaching hospitals of Swat (Pharm-D Project).
- Two months training at CCL Pharmaceuticals Lahore (B.Pharm Project)

#### **Co-Curricular Contributions**

- Member/Secretary Departmental Admission Committee
- Program team member for Self Assessment report of M.Phil and PhD Scholars at Department of Pharmacy University of Malakand.
- Member Scientific Committee, Department of Pharmacy, University of Malakand.

#### **Research Interests**

- Natural Products research, Activity guided isolation of bioactive compounds
- Phytotherapy for Alzheimer using in vitro and in vivo models.
- Anticancer evaluations of natural compounds against cell lines
- Preliminary Pharmacological Screening of non antibiotics (i.e. Antidepressants, phenothiazines and natural compounds) for their intrinsic antibacterial activities.
- Screening of these drugs as potential efflux pump inhibitors.
- Green synthesis of metals nanoparticles and their theranostic applications
- Preliminary Pharmacological Screening of natural products or pure compounds using standard bioassays' techniques for their anti-diabetic, antibacterial, antifungal, cytotoxic, phytotoxic, insecticidal, anthelmintic, antispasmodic, antioxidant, enzyme inhibition and anti-lashmenial activities.

### Symposium/Seminar/Workshops Attended:

- As Organizer of first National Conference on "Emerging trends in Pharmaceutical Sciences" at University of Malakand, 2017.
- National conference on Phytomedicine: Present and future perspectives 9-11 Oct 2018 SBBU.
- Workshop on English for University teachers, Organized by ORIC-HEC at University of Malakand, 2017.
- Workshop on Biosafety and Biosecurity for scientists, Organized by Department of Biotechnology, University of Malakand. 15-11-2017
- Seminar on "Old Plants, New Remedies." University of Malakand (7/9/2008-7/10/2008).
- Seminar on "Role of Clinical and Hospital Pharmacist in Hospital " Kohat University of Science and Technology, Kohat KPK, Pakistan (10/7/2012).
- Seminar on "Raising awareness and encouraging students for research on Zoonotic & Environmentally transmitted diseases and response" March 28, 2013 at Kohat University of Science and Technology, Kohat KPK, Pakistan.
- Seminar on Role of community pharmacy in health profession at Pharmacy Department, University of Peshawar Oct 2015.
- Seminar on DNA at Department of biotechnology, University of Malakand April 2016.

### Conference Oral Presentations/ Invited speaker

- **Muhammad Ayaz**, Muhammad Junaid, Farhat Ullah, Abdul Sadiq, Muhammad Shahid, Muhammad Ovais. Alzheimer's Disease Modulating Potentials of *Polygonum hydropiper* L using transgenic animal Models. Distinguished speaker at Asian Conference on Science, Technology and Medicine (ACSTM-2019) Dubai 12-14 February 2019 Page 58.
- **Muhammad Ayaz**, Farhat Ullah, Abdul Sadiq, Ashfaq ahmad  $\beta$ -sitosterol markedly improves cortex and hippocampal-dependent cognitive functions in transgenic animals model of Alzheimer's disease: In-vitro, in-vivo and molecular docking correlates! international conference on chemical and pharmaceutical sciences: recent approaches in research and applications. **17-19 Jan 2018**, FCCU Lahore
- **Muhammad Ayaz**, Abdul Sadiq, Farhat Ullah, Ashfaq ahmad Alzheimer's disease modulating potentials of  $\beta$ -sitosterol in transgenic animals model of Alzheimer's disease. International Pharmaceutics conference (IPC) on Exploring new avenues for pharmacy profession **2018 BZU** Multan (Invited speaker) page no 39.
- **Muhammad Ayaz et al.**, Anti-Alzheimer's studies on phytosterols using in-vitro and in-vivo models. National conference on Phytomedicine: Present and future perspectives **9-11 Oct 2018** SBBU.

## Conference Proceedings/Abstracts

- **Muhammad Ayaz<sup>1\*</sup>**, Muhammad Junaid<sup>1</sup> Abdul Sadiq<sup>1</sup>, Farhat Ullah<sup>1</sup> Ashfaq Ahmad<sup>1</sup>. Phytosterol from *Polygonum hydropiper* L markedly improves cortex and hippocampal-dependent cognitive functions in transgenic animals model of Alzheimer's disease (**First Position**).
- Ashfaq Ahmad, Abdul Sadiq, Farhat Ullah, **Muhammad Ayaz**, Neuropharmacological and anti-cancer potentials of newly synthesized aldehyde derivatives of succinimides.
- **Muhammad Ayaz**, Muhammad Junaid, Farhat Ullah, Fazal Subhan and Abdul Sadiq. Beta-sitosterol from *Polygonum hydropiper* L. Markedly improves Cortex and Hippocampus Dependent Cognitive functions in animals Models of Alzheimer's Disease: In-Vitro, In-Vivo and Molecular docking Correlates! First National Conference on Emerging trends in Pharmaceutical Sciences at University of Malakand NCEPT-109, Oct 9-11 2017.
- Abdul Sadiq, Farhat Ullah, **Muhammad Ayaz**. Exploration of biologically active molecules: Synthetic and Natural Products Chemistry. NCEPT-50, UOM, Oct 9-11 2017.
- Anwar Ul Haq, Hamid Afridi, Akhtar Aman, Haya Hussain, Farhat Ullah, **Muhammad Ayaz**, Abdul Sadiq. Insecticidal and Pesticidal Activities of selected Medicinal plants from Dir (U) Khyber Pakhtunkhwa. NCEPT-51, UOM, Oct 9-11 2017.
- Anwar Zeb, Farhat Ullah, Abdul Sadiq, **Muhammad Ayaz**. Analgesic potentials of *Isodon rugosus* Wall. ex Benth: Mechanism based study on isolated compounds. NCEPT-52, UOM, Oct 9-11 2017.
- Ashfaq Ahmad, Farhat Ullah, **Muhammad Ayaz**, Abdul Sadiq. Synthesis, Cholinesterase inhibitions and antioxidant evaluations of Aldehyde Derivatives of Succinimides. NCEPT-53, UOM UOM, Oct 9-11 2017.
- Fawad Mehmood, Muhammad Saeed Jan, Farhat Ullah, Sajjad Ahmad, **Muhammad Ayaz**, Abdul Sadiq. Synthesis, Anti-cholinesterase and antioxidant potentials of Ketoesters Derivatives of Succinimides. NCEPT-54, UOM, Oct 9-11 2017.
- Rehmat Ali, Farhat Ullah, **Muhammad Ayaz**, Abdul Sadiq. Pharmacological studies and isolation of pure compounds from *Notholirion thomsonianum*. NCEPT-57, UOM, Oct 9-11 2017.
- Anwar Hayat, Farhat Ullah, Muhammad Ayaz, Abdul Sadiq. Anti-cholinesterase and antioxidant potentials of *Jurinea himalaica* R.R.Stewart NCEPT-59, UOM, Oct 9-11 2017.
- Syed Majid Shah, Farhat Ullah, **Muhammad Ayaz**, Abdul Sadiq. Assessment of Phytochemical and antioxidant activity of extract and fractions of *Ifloga spicata*. NCEPT-64, UOM, Oct 9-11 2017.
- Nawazish-i-Hussain Syed, Nazia Nazir, Imran Tariq, Rukhsan Anwar, **Muhammad Ayaz**. Anti-inflammatory and analgesic activities of chitosan-based serratiopeptidase microcapsules. NCEPT-82, UOM, Oct 9-11 2017.

## Editorial Contributions.

### Editorial Boards Member.

- Associate editor **Frontiers in Pharmacology** (Impact Factor 4.4)  
**Link:** <http://loop.frontiersin.org/people/294513/editorial>
- Associate editor **BMC complementary and Alternative Medicine** (Impact Factor 2.28)  
**Link:** <https://bmccomplementalternmed.biomedcentral.com/about/editorial-board>
- Associate editor Digital Chinese Medicine **Link:** <http://dcmhi.com/editorial-board>.
- Associate editor **International Journal of Pharmacology** (Impact Factor 0.765)  
**Link:** <https://scialert.net/eboardlivedna.php?issn=1811-7775&id=92.17933>
- Associate editor **Trends in Medical Research**  
**Link:** <https://scialert.net/eboardlivedna.php?issn=1819-3587&id=92.17933>
- Associate editor **Pharmacologia**
- Member Asian Council of Science Editors

### Special Issues

Guest editing special issue for frontiers in pharmacology (Ethnopharmacology) on;

- **Natural Products-Based Drugs: Potential Therapeutics against Alzheimer's Disease and other Neurological Disorders** (Link <https://www.frontiersin.org/research-topics/6749/natural-products-based-drugs-potential-therapeutics-against-alzheimers-disease-and-other-neurologica>)
- <https://www.frontiersin.org/research-topics/16403/current-trends-in-medicinal-plant-research-and-neurodegenerative-disorders>
- **Natural Products-Based Drugs: Potential Therapeutics against Alzheimer's Disease and other Neurological Disorders (Vol-2)**

### Journals Reviewer/Referee.

- Reviewer, Molecular Neurobiology (Elsevier) Impact Factor 5.137
- Reviewer, Phytomedicine (Elsevier ) Impact Factor 3.126.
- Reviewer, Pharmacological Research (Elsevier) Impact Factor 4.408
- Reviewer, European Journal of Integrative medicine (Elsevier) Impact Factor 0.769.
- Reviewer, Biomedicine and Pharmacotherapy (Elsevier) Impact Factor 2.326.
- Reviewer, Journal of King Saud University-Sciences (Elsevier )
- Reviewer, Journal of herbal Medicine (Elsevier ) Impact Factor 1.3.
- Reviewer, Microbial Pathogenesis (Elsevier ) Impact Factor 2.009.
- Reviewer, PLOS ONE (PLOS Publishers) Impact Factor 2.806.

- Reviewer, Frontiers in Pharmacology (Frontiers Publishers) Impact Factor 4.418.
- Reviewer, Frontiers in Aging Neuroscience (Frontiers Publishers) Impact Factor 4.52.
- Reviewer, BMC complementary and alternative medicine (BioMed Central) Impact Factor 2.28.
- BMC Psychiatry (BioMed Central) Impact Factor 2.613.
- Reviewer, Biological Research (BioMed Central) Impact Factor 1.692.
- Reviewer, Natural product research (Taylor and Francis) Impact Factor 1.8.
- Reviewer, Clinical and Experimental Hypertension (Taylor and Francis) Impact Factor 1.234.
- Reviewer, Mycology: An International Journal of Fungal Biology (Taylor and Francis)
- Reviewer, Pharmaceutical Biology (Taylor and Francis/Informa Health) Impact Factor 1.241.
- Reviewer, African journal of Pharmacy and Pharmacology (Academic Journals)
- Reviewer, African journal of traditional complementary and alternative medicine (Academic Journals) Impact Factor 0.5.
- Reviewer, African journal of biochemistry (Academic Journals).
- Reviewer, Toxicology and Industrial health (SAGE) Impact Factor 1.67.
- Reviewer, International J Food Properties (Taylor and Francis)
- Brazilian J Pharmaceutical Sciences (SciELO)
- Reviewer, Journal of Molecular Pharmaceutics & Organic Process Research (Omics Publishers)
- Reviewer, Bioenergetics Journal (Omics Publishers)
- Medicinal and aromatic plants (Omics Publishers)

### Research Scholars Supervised

1	<b>Mr. Ihsan Ullah</b>	2015-17	<i>Ethnopharmacological based evaluation of Sorbaria tomentosa with focus on alzheimer's disease, depression and anxiety.</i>	Co-supervision	M.Phil	<b>Completed</b>
2	<b>Mr. Syed Gowhar Sultan</b>	2015-17	Synthesis, characterization and gastroprotective Activity of a disulfone derivative	Co-supervision	M.Phil	<b>Completed</b>
3	<b>Miss. Mehreen Ghufra</b>	09-AWKUM-PGWM-14	Development Of New Anticancer By Computer-Aided Drug Programs	Co-supervision	Ph.D	<b>Completed</b>
4	<b>Mr. Muhammad Ashraf</b>	2019-20	Course Work Continued	Supervisor	M.Phil	<b>Continued</b>
5	<b>Mr. Asif Nawaz</b>	2019-20	Course Work Continued	Supervisor	M.Phil	<b>Continued</b>
6	<b>Mr. Shah Zeb</b>	2019-20	Course Work Continued	Co-supervision	M.Phil	<b>Continued</b>

## Publications:

### Books

- **Muhammad Ayaz**, Tahir Ali, Abdul Sadiq, Farhat Ullah and Myeong Ok Kim "**Natural Products-Based Drugs: Potential Therapeutics against Alzheimer's Disease and other Neurological Disorders**". Frontiers Switzerland ISSN 1664-8714, ISBN 978-2-88963-348-7, (2020) doi: 10.3389/978-2-88963-348-7
- Chittaranjan Patra Irshad Ahmad **Muhammad Ayaz** Ali Talha Khalil Sudip Mukherjee Muhammad Ovais; **Biogenic Nanoparticles for Cancer Theranostics**; By Elsevier ISBN : 9780128214671, 1st edition, June 2021

### Book Chapters:

1. Ali Talha Khalil, Javed Iqbal, Asma Shah, Mubasher Zahir Haque, Imran Khan, **Muhammad Ayaz**, Irshad Ahmad and Hamidullah Shah; The bio–nano interface as an emerging trend in assembling multi-functional metal nanoparticles **ACS Nanoscience**, 2021, 7, 1–24 DOI: 10.1039/9781839163791-00001
2. Muhammad Ovais<sup>1</sup>, Nashmia Zia<sup>2</sup>, Ali Talha Khalil<sup>3</sup>, **Muhammad Ayaz**<sup>4</sup>, Amjad Khalil<sup>5</sup> and Irshad Ahmad<sup>5,\*</sup> **Nanoantibiotics: Recent Developments and Future Prospects; Chapter 5 in Book titled "** Frontiers in Clinical Drug Research - Anti-Infectives, Bentham Science Publishers, 2018, Vol. 5, 30-54.
3. M. Ovais, MZ Hoque, AT Khalil, **M. Ayaz**, I Ahmad; **Mechanisms underlying the anticancer applications of biosynthesized nanoparticles in; biogenic nanoparticles for cancer theranostics**, Elsevier, Page no 231-249
4. **Muhammad Ayaz**<sup>1\*</sup>, Muhammad Ovais<sup>2</sup>, Irshad Ahmad<sup>3</sup>, Abdul Sadiq<sup>1</sup>, Ali Talha Khalil<sup>4</sup>, Farhat Ullah<sup>1</sup> **Biosynthesized metal nanoparticles as potential Alzheimer's disease therapeutics in Book on Metal Nanoparticles for Drug Delivery and Diagnostic Applications**. 2019. Elsevier Pages 31-44.
5. Ovais M., Khalil A.T., **Ayaz M.**, Ahmad I. (2019) **Biosynthesized Metallic Nanoparticles as Emerging Cancer Theranostics Agents**. In: Rai M., Jamil B. (eds) Nanotheranostics. Springer, Cham. pp 229-244 DOI[https://doi.org/10.1007/978-3-030-29768-8\\_11](https://doi.org/10.1007/978-3-030-29768-8_11)
6. Muhammad Ovais, Ali Talha Khalil, **Muhammad Ayaz**, Irshad Ahmad; Metal oxide nanoparticles and plants; in **Phytonanotechnology: Challenges and Prospects** page 123-135, Chapter 7, ISBN: 978-0-12-822348-2 Published by Elsevier Radarweg 29, PO Box 211, 1000 AE Amsterdam, Netherlands



## Research/Review Articles: (2021)

1. Ali Talha Khalil<sup>1</sup>, Muhammad Ovais<sup>2</sup>, Javed Iqbal<sup>3</sup>, Arbab Ali<sup>2</sup>, **Muhammad Ayaz<sup>4\*</sup>**, Manzar Abbas<sup>5</sup>, Irshad Ahmad<sup>6</sup>, Hari Parsad Devkota<sup>7\*</sup>; Synthesis strategies of microbes-derived metal nanoparticles for cancer therapeutics: A mechanistic approach. **Seminars in Cancer Biology**. <https://doi.org/10.1016/j.semcancer.2021.06.006> 2021 (I.F 15.70).
2. Uzma Saleem, Rubina Akhtar, Fareeha Anwar, Muhammad Ajmal Shah, Zunera Chaudary, **Muhammad Ayaz**, Bashir Ahmad; Neuroprotective potential of *Malva neglecta* is mediated via down-regulation of cholinesterase and modulation of oxidative stress markers, **Metabolic Brain Disease** <https://doi.org/10.1007/s11011-021-00683-x> (I.F 3.58).
3. Muhammad Furqan Akhtar, Muhammad Omer Mehal, Ammara Saleem, Ahmad El Askary, Mohamed M. Abdel-Daim, Fareeha Anwar, **Muhammad Ayaz & Alam Zeb**, Attenuating effect of *Prosopis cineraria* against paraquat-induced toxicity in prepubertal mice, *Mus musculus*; **Envir. Sci. Poll. Res.** (2021) <https://doi.org/10.1007/s11356-021-16788-w> (I.F 4.58).
4. Xin Tong<sup>1</sup>, Xiaoling Li<sup>2</sup>, **Muhammad Ayaz<sup>\*3</sup>**, Farhat Ullah <sup>3</sup>, Abdul Sadiq <sup>3</sup>, Muhammad Ovais<sup>4, 5</sup>, Muhammad Shahid <sup>6</sup>, Mars Khayrullin<sup>7</sup>, Ali Hazrat <sup>8</sup> Neuroprotective studies on *Polygonum hydropiper* L. essential oils using transgenic animal models. **Front. Pharmacol.** 2021, | doi: 10.3389/fphar.2020.580069 (I.F 5.81).
5. **Muhammad Ayaz\***, Abdul Wadood, Abdul Sadiq, Farhat Ullah, Olga Anichkina and Mehreen Ghufuran, In-silico evaluations of the isolated phytosterols from *Polygonum hydropiper* L against BACE1 and MAO drug targets; **Journal Of Bimolecular Structure And Dynamics**, <https://doi.org/10.1080/07391102.2021.1940286> (I.F 3.5).
6. Ali Talha Khalil, Malik Dilshad Khan, Shumaila Razzaque, Shakeeb Afridi, Ikram Ullah, Javed Iqbal, Shahida Tasneem, Asma Shah, Zabta Khan Shinwari, Neerish Revaprasadu, **Muhammad Ayaz\***, Single precursor-based synthesis of transition metal sulfide nanoparticles and evaluation of their antimicrobial, antioxidant and cytotoxic potentials **Applied Nanoscience** (2021) (I.F 3.6).
7. Mater H. Mahnashi<sup>1\*</sup>, Yahya S. Alqahtani<sup>1</sup>, Bandar A. Alyami<sup>1</sup>, Ali O. Alqarni<sup>1</sup>, Farhat Ullah<sup>2</sup>, Abdul Wadood<sup>3</sup>, Abdul Sadiq<sup>2</sup>, Azam Shareef<sup>3</sup>, **Muhammad Ayaz<sup>\*2</sup>**; Cytotoxicity, anti-angiogenic, anti-tumor and molecular docking studies on Phytochemicals isolated from *Polygonum hydropiper* L. **BMC Complementary and Alternative Medicine** Accepted (2021) (Impact Factor 3.65).

8. Mater H. Mahnashi<sup>1\*</sup>, Bandar A. Alyami<sup>1</sup>, Yahya S. Alqahtani<sup>1</sup>, Ali O. Alqarni<sup>1</sup>, Muhammad Saeed Jan, Muhammad Ayaz\*<sup>2</sup> Farhat Ullah<sup>2</sup>, Muhammad Shahid<sup>3</sup>, Umar Rashid, Abdul Sadiq<sup>2</sup>, Neuroprotective potentials of selected naturaledible oils using enzyme inhibitory, kinetic and simulation approaches; **BMC Complementary and Alternative Medicine** Accepted (2021) (Impact Factor 3.65).
9. Sajjad Ahmad, Mater H Mahnashi, Bandar A Alyami, Yahya S Alqahtani, Farhat Ullah, **Muhammad Ayaz**, Muhammad Tariq, Abdul Sadiq, Umer Rashid; Synthesis of Michael Adducts as Key Building Blocks for Potential Analgesic Drugs: In vitro, in vivo and in silico Explorations; **Drug Design, Development and Therapy** 2021;15 1299–1313 (I.F 4.16).
10. Airat Khabirov, Fail Khaziakhmetov, Vyacheslav Kuznetsov, Hamit Tagirov, Maksim Rebezov Aleksandra Andreyeva, Almaz Basharov, Zhanibek Yessimbekov, **Muhammad Ayaz\***, Effect of Normosil Probiotic Supplementation on the Growth Performance and Blood Parameters of Broiler Chickens, **Ind. J Pharma Edu. Res.** 54(4) 2021; (I.F 0.68).
11. Hina Rehman, Muzamil Shah, Zabta Khan Shinwari, Waqar Ali, Nadir Zaman Khan, Muhammad Aasim, Noor Shad Bibi And Muhammad Ayaz\* Total phenolic-flavonoids contents, anti-leishmanial, Antimicrobial and antioxidant potentials of pakistani tea Brands and tea plant camellia sinensis; **Pak. J. Bot.**, DOI: [http://dx.doi.org/10.30848/PJB2022-2\(42\)](http://dx.doi.org/10.30848/PJB2022-2(42)) (I.F 0.98).
12. Abdul Sadiq, Mater H. Mahnashi\*<sup>2</sup>, Bandar A. Alyami, Yahya S. Alqahtani, Ali O. Alqarni, Muhammad Saeed Jan, Muhammad Ayaz, Farhat Ullah, Umer Rashid; Molecular docking supported observed changes in anticholinesterase, antioxidant and  $\alpha$ -glucosidase inhibitions upon the bromination of benzene sulfonamide, **J Chem. Soc. Pak** Accepted 2021 (I.F 0.54).

### Research/Review Articles: (2020)

13. **Muhammad Ayaz**, Irshad Ahmad, Abdul Sadiq, Farhat Ullah, Muhammad Ovais, Ali Talha Khalil, Hari Prasad Devkota; *Persicaria hydropiper* (L.) Delarbre: A review on traditional uses, bioactive chemical constituents and pharmacological and toxicological activities. **J Ethnopharmacology** Vol 251, 6 April 2020, 112516 (I.F 4.36).
14. Farhat Ullah, **Muhammad Ayaz\***, Abdul Sadiq, Farman Ullah, Ishtiaq Hussain, Muhammad Shahid, Zhanibek Yessimbekov, Anjana Adhikari-Devkota and Hari Prasad Devkota; **Potential Role of Plant Extracts and Phytochemicals against Foodborne Pathogens: Applied. Science** .2020, 10, 4597; doi:10.3390/app10134597. (I.F 2.67).

15. Ayesha Sani, Dilawar Hassan, Ali Talha Khalil , Affifa Mughal , Ahmed El-Mallul , **Muhammad Ayaz\***, Zhanibek Yessimbekov , Zabta Khan Shinwari , Malik Maaza Floral Extracts Mediated Green Synthesis of NiO Nanoparticles and Their Diverse Pharmacological Evaluations; **Journal Of Biomolecular Structure And Dynamics**, 2020, <https://doi.org/10.1080/07391102.2020.17> (I.F 3.3).
16. Shehla Akbar, Fazal Subhan, Muhammad Shahid, Abdul Wadood, Naila Shahbaz, Umar Farooq, **Muhammad, Ayaz**, Naila Raziq; 6-Methoxyflavanone abate cisplatin-induced neuropathic pain apropos anti-inflammatory mechanisms: A behavioral and molecular simulation study. **European Journal of Pharmacology**. 30 Jan. 2020, 172972. (I.F 4.43).
17. Sultan Ahmad, Alam Zeb, **Muhammad Ayaz**, Michael Murkovic ; Characterization of phenolic compounds using UPLC–HRMS and HPLC–DAD and anti-cholinesterase and anti-oxidant activities of *Trifolium repens* L. leaves; **European Food Research and Technology** vol. 246, 485–496 (2020) (I.F 2.99).
18. Uzma Saleem, Sana Khalid, Shigraf Zaib, Fareeha Anwar, Bashir Ahmad, Izhar Ullah, Alam Zeb, **Muhammad Ayaz\*** Phytochemical analysis and wound healing studies on Ethnomedicinally important plant *Malva neglecta* Wallr, **Journal of Ethnopharmacology**, Vol. 249,1 March 2020, 112401 (Impact Factor 4.36) DOI: <https://doi.org/10.1016/j.jep.2019.112401>
19. Muhammad Saeed Jan, Sajjad Ahmad, Fida Hussain<sup>1</sup>, Ashfaq Ahmad, Fawad Mahmood, Umer Rashid, Obaid-ur-Rahman Abid, Farhat Ullah, **Muhammad Ayaz**, Abdul Sadiq; Design, Synthesis, In-vitro, In-vivo and In-silico studies of 3 Pyrrolidine-2,5-dione Derivatives as Multi-target Anti-inflammatory Agents; **European Journal of Medicinal Chemistry** Vol. 186, 15 January 2020, 111863 (I.F 6.51).
20. Abdul Sadiq, Umer Rashid, Sadiq Ahmad, Mohammad Zahoor, Mohamed F AlAjmi, Riaz Ullah, Omar M Noman, Farhat Ullah, **Muhammad Ayaz**, Iftikhar Khan, Zia-Ul Islam, Waqar Ali; Treating Hyperglycemia From *Eryngium caeruleum* M. Bieb: *In-vitro*  $\alpha$ -Glucosidase, Antioxidant, *in-vivo* Antidiabetic and Molecular Docking-Based Approaches. **Front Chem**. 2020 Nov 26; 8:558641. doi: 10.3389/fchem.2020.558641. (I.F 5.22).
21. Ashfaq Ahmad, Farhat Ullah, Abdul Sadiq, **Muhammad Ayaz**, Muhammad Saeed Jan, Muhammad Shahid, Abdul Wadood, Fawad Mahmood, Umer Rashid, Riaz Ullah, Muhammad Umar Khayam Sahibzada , Ali S Alqahtani Comparative Cholinesterase,  $\alpha$ -Glucosidase Inhibitory, Antioxidant, Molecular Docking, and Kinetic Studies on Potent Succinimide Derivatives, 2020, **Drug Design, Development and Therapy** 14(2165– 2178) (I.F 4.6).

#### **Research/Review Articles: (2019)**

22. **Muhammad Ayaz<sup>1\*</sup>**, Abdul Sadiq<sup>1</sup>, Muhammad Junaid<sup>1</sup>, Farhat Ullah<sup>1</sup>, Muhammad Ovais<sup>2</sup>, Ikram Ullah<sup>3</sup>, Muhammad Shahid<sup>4</sup> Flavonoids as prospective neuroprotectants and their therapeutic propensity in aging associated neurological disorders. **Front. Aging Neurosci** | doi: 10.3389/fnagi.2019.00155,11 Jun 2019 (I.F 5.75).

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