**CURRICULUM VITAE**

Dr. Salman Zafar

Assistant Professor (TTS)

Institute of Chemical Sciences, University of Peshawar,

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**PERSONAL INFORMATION**

**FATHER’S NAME:** Mr. Zafar Ullah Khan

**NATIONALITY:** Pakistani

**POSTAL ADDRESS:** Office-III, PNRL, Institute of Chemical Sciences, University of Peshawar, Peshawar-25120, Khyber Pakhtunkhwa, Pakistan

**CURRENT POSITION:** Assistant Professor (TTS)

**ORGANIZATION:** Institute of Chemical Sciences, University of Peshawar, Peshawar-25120, Pakistan

**QUALIFICATION:**  **Ph. D.** (**Organic Chemistry**) (2012)

H. E. J. Research Institute of Chemistry, I. C. C. B. S.,

University of Karachi, Karachi, Pakistan

**Thesis Title**: “**Study of Biotransformation of Most Common Drugs by Microbial and Plant Cell Cultures**”.

**M. Sc.** (**Organic Chemistry**) (A grade) (2006)

University of Peshawar, Peshawar, Pakistan

**Thesis Title**: “**Phytochemical investigation of the bark of *Bauhinia variegate***”*.*

**B. Sc.** (**Chemistry**, Zoology, Geography) (A grade) (2003)

University of Peshawar, Peshawar, Pakistan

**H. S. S. C.** (Chemistry, Biology, Physics) (A grade) (2001)

Federal Board of Intermediate and Secondary Education, Islamabad.

**S. S. C.** (Chemistry, Biology, Physics, Math) (A grade) 1999

Federal Board of Intermediate and Secondary Education, Islamabad.

**PROFESSIONAL SKILLS:**

* Hand on experience on LC-MSMS, GC-MS, EI-MS, UR, IR, NMR, HPLC, and HPTLC
* Interpretation of UV, IR, Mass and NMR spectroscopic data for structure elucidation of organic molecules.
* Qualitative analysis of samples with preparative HPLC.
* Quantitative analysis of samples with HPLC and HPTLC.
* Synthetic manipulation of organic molecules.
* Preparation and maintenance of microbial cell cultures.
* Sterilization techniques
* Biocatalysis/biotransformation protocols

### ACADEMIC ACHEIVEMENTS:

* GRE Subjective (Chemistry) with 65 percentile
* 1st Div throughout academic career

**PROFESSIONAL EXPERIENCE:**

* Quality Control Analyst at Bryon Pharmaceuticals Ltd. Peshawar (October 2005-January 2006)
* Assistant Professor (Contract), Department of Chemistry, Abdul Wali Khan University (AWKUM), Mardan-23200, Pakistan (June 07, 2012-June 06, 2013)
* Assistant Professor, Department of Chemistry, Sarhad University of Science and Information Technology (SUIT), Peshawar, Pakistan (September 4, 2013- January 12, 2015)
* Assistant Professor (TTS), Institute of Chemical Sciences, University of Peshawar, Peshawar-25120, Pakistan (January 03, 2015- Till Date)
* Post-doctoral researcher, School of Pharmacy, Hunan University of Chinese Medicine, Changsha, P.R. China (June 01, 2017-May 31, 2018)

### CONFERENCES / SYMPOSIA:

* 11th International Symposium on Natural Product Chemistry (H.E.J.R.I.C., Karachi, 2008)
* 12th International Symposium on Natural Product Chemistry (H.E.J.R.I.C., Karachi, 2010)
* 2nd Sao Paulo Advanced School on Bioorganic Chemistry (Faculty of Pharmaceutical Sciences, UNESP, Araraquara, Brazil, 2013)
* Sao Paulo School of Advance Science on “Neglected Diseases”(SPSAS-ND3, CNPEM, Campinas, Brazil, 2015)
* The 3rd Hunan International Forum for Innovation and Development of Biomedicine and Chinese Medicine (Changsha, P. R. China, 2017)
* International Meeting on the Traditional Chinese Medicine (Guiyang, P. R. China, 2017)
* 30th National and 17th International Chemistry Conference (University of Peshawar, Pakistan, 2018)

**WORKSHOPS / TRAININGS:**

* + Media Workshop/Press Conference on Creating Awareness About the Role of Biotechnology in Sustainable National Development (H.E.J.R.I.C., Karachi, 2009)
	+ Tribute to the father of green revolution Nobel Peace Laureate Prof. Dr. Norman Borlaug & Launching of ISAAA Brief 41/ Press Conference (H.E.J.R.I.C., Karachi, 2010)
* 2-Days Workshop on “Micro-Teaching” (Abdul Wali Khan University, Mardan, 2013)
* 2-Days Training program on Communication Skills (Sarhad University of S & IT, Peshawar, 2014)
* 3-Days Workshop on “Teaching as Profession and Micro-Teaching” (Sarhad University of Science and IT, Peshawar, 2014)
* NASIC Workshop on “Spectroscopic Techniques and Their Applications in Structure Determination” (H.E.J.R.I.C., Karachi 2014)

### POSTER / ORAL PRESENTATIONS:

* *In vitro* Models for Mammalian Drug Metabolism: 12th International Symposium on National Product Chemistry (2010, Karachi, Pakistan).
* Enzyme Inhibitors from Microbial Transformation of Dihydrotestosterone (2013, UNESP, Araraquara, Brazil)
* Protecting Skin Lesions from Bacterial Superinfection: Anti-bacterial Potential of *Acacia modesta* (2015, Campinas, Brazil)
* Targeting Epilepsy: Biotransformation of Neuroactive Steroids for Discovery of Anti-epileptic Molecules (2016, Peshawar, Pakistan)
* Chemo-enzymatic Synthesis of Structurally Diverse Bioactive Molecules (2017, Guiyang, P.R. China)

**PROJECTS/GRANTS:**

* Start-up research grant from Higher Education Commission, Pakistan worth 0.5 million-Natural Product Chemistry
* Start-up research grant from Higher Education Commission, Pakistan worth 0.32 million-Organic Synthesis

**MEMBERSHIPS:**

* Member, Chemical Society of Pakistan.
* Member of the Council for Innovation and Development of Traditional Chinese Medicine of Hunan province, P. R. China

**TEACHINGS:**

* Basic Organic Chemistry
* Natural Product Chemistry
* Retrosynthesis
* Photochemistry
* Spectral Analysis of Organic Compounds
* Heterocyclic Chemistry
* Stereochemistry
* Basic Concepts in Organic Chemistry
* Reactions involving Alkenes, Carbonyl, and Organometallic compounds
* Practical Organic Chemistry
* Advance Nuclear Magnetic Resonance Spectroscopy

**LIST OF PUBLICATIONS:**

**BOOKS / CHAPTERS**

1. Chapter in “**Pharmaceutical Biocatalysis: Chemoenzymatic Synthesis of Active Pharmaceutical Ingredients**”, Edited by Peter Grunwald, 2019, Jenny Stanford Publishing.

**RESEARCH ARTICLES**

1. Yousuf S.; **Zafar S**.; Choudhary M. I.; Ng S. W. 17-Hydroxy-17-(hydroxymethyl)estr-4-en-3-one. *Acta Cryst*., 2010, E66, o2894.(Google scholar citation: 04)
2. Choudhary, M. I.; **Zafar S**.; Khan N. T.; Ahmed S.; Noreen S.; Marasini B.; Al-Khedhairy A. A. and Atta-ur-Rahman Biotransformation of dehydroepiandrosterone with *Macrophomina phaseolina* and -glucuronidase inhibitory activity of transformed products. *J. Enz. Inhib. Med. Chem.,* 2012, 27, 348-355. (Google scholar citation: 27)
3. **Zafar S**.; Yousuf S.; Kayani H. A.; Saifullah; Khan S.; Al-Majid A. M.; and Choudhary M. I. Biotransformation of oral contraceptive ethynodiol diacetate with microbial and plant cell cultures. *Chemistry Central Journal*, 2012, 6, 109. (Google scholar citation: 16)
4. **Zafar S**.; Bibi M.; Yousuf S.; and Choudhary M. I. New metabolites from fungal biotransformation of an oral contraceptive agent: Methyloestrenolone. *Steroids*, 2013, 78. 418-425. (Google scholar citation: 15)
5. **Zafar S**.; Choudhary M. I.; Dalvandi K.; Mahmood, U.; and Zaheer-ul-Haq. Molecular Docking Simulation Studies on Potent Butyrylcholinesterase Inhibitors Obtained from Microbial Transformation of Dihydrotestosterone. *Chemistry Central Journal*, 2013, 7:164. (Google scholar citation: 05)
6. Ahmed M. S.; **Zafar S**.; Bibi M.; Bano S.; Atia-tul-Wahab; Atta-ur-Rahman; Choudhary M. I.. Biotranformation of Androgenic Steroid Mesterolone with *Cunninghamella blakesleeana* and *Macrophomina phaseolina*. *Steroids*, 2014, 82:53-59. (Google scholar citation: 26)
7. Choudhary M. I.; Khan N. T.; **Zafar S**.; Noreen S.; Al-Majid A. M.; Al-Resayes S. I.; and Atta-ur-Rahman. Biotransformation of dianabol with the filamentous fungi and β-glucuronidase inhibitory activity of transformed products. *Steroids*, 2014, 85:65-72. (Google scholar citation: 08)
8. **Zafar S**.; Khan A.; Khan M.; Parveen Z.; and Khan K. *In vitro* Evaluation of Anti-Microbial Potential of the Leaf Extracts of *Acacia modesta.* *Journal of the Chemical Society of Pakistan*, 2014, 36:1105-1108. (Google scholar citation: 05)
9. Raziq N.; Saeed M.; Ali M. S.; **Zafar S**.; Ali M. I. *In vitro* Anti-oxidant Potential of New Metabolites from *Hypericum oblongifolium* (*Guttiferae*). *Natural Product Research,* 2015, 29:2265-2270. (Google scholar citation: 08)
10. Farooq M. U.; Yousuf S.; **Zafar S**.; Choudhary M. I.; Ahmed M. Transferred multipolar atom model for 10,17-dihydroxy-17-methylestr-4-en-3-one dehydrate obtained from the biotransformation of methyloestrenolone. *Acta Cryst C: Structural Chemistry*, 2016, C-72, 1-7. (Google scholar citation: 01)
11. Ahmed M.S.; **Zafar S**.; Yousuf S.; Wahab A.T.; Atta-ur-Rahman; Choudhary M.I. Biotransformation of 6-Dehydroprogesterone *Aspergillus niger* and *Gibberella fujikuroi*. *Steroids*, 2016, 112:62-67. (Google scholar citation: 12)
12. Hussain Z.; Dastagir N.; Hussain S.; Jabeen A.; **Zafar S**.; Malik R.; Bano S.; Wajid A.; Choudhary M.I. *Aspergillus niger*-mediated biotransformation of methenolone enanthate, and immunomodulatory activity of its transformed products. *Steroids*, 2016, 112:68-73. (Google scholar citation: 10)
13. M. Saeed, Farah Gul, **Zafar S.,** Khalid M.K., Achyut A. Antimicrobial and antioxidant activities of a new metabolite from *Quercus incan****a.*** *Natural Product Research*, 2017, 31:1901-1909. (Google scholar citation: 10)
14. **Zafar S**., Ahmad R., Khan R. Biotransformation: A green and efficient way of antioxidant synthesis. *Free Radical Research,* 2016, 50:939-948. (Google scholar citation: 07)
15. Barkatullah, Ibrar M., Muhammad N., Khan A., Khan S.A., **Zafar S**., Jan S., Riaz N., Ullah Z., Farooq U., and Hussain J. Pharmacognostic and phytochemical studies of *Zanthoxylum armatum* DC. *Pakistan Journal of Pharmaceutical Sciences*, 2017, 30:2:429-438. (Google scholar citation: 10)
16. Raziq N., Saeed M., Ali MS., **Zafar S**., Shahid M., Lateef M. A new glycosidic antioxidant from *Ranunculus muricatus* L. (Ranunculaceae) exhibited lipoxygenase and xanthine oxidase inhibition properties. *Natural Product Research*, 2017, 31:1251-1257. (Google scholar citation: 12)
17. **Zafar S**., Faiz -Ur-Rehman, Shah ZA., Rauf A., Khan A., Khan MH., Rahman KU., Khan S., Ullah A., Shaheen F. Potent leishmanicidal and anti-bacterial metabolites from *Olea ferruginea.* *Journal of Asian Natural Products Research*, 2018, 21:679-687. (Google scholar citation: 01)
18. **Zafar S**., Wang W. Exploring the Complex Phytochemical and Pharmacological Value of *Swertia punicea* Hemsl. *Current Traditional Medicine*, 2018.4:238-248. (Google scholar citation: 01)
19. Tang Y., Zeng T., **Zafar S**., Yuan H., Bin L., Peng C-Y., Wang S., Jian Y., Qin Y., Choudhary M. I. Wang W. *Lonicerae* flos: A Review of Chemical Constituents and Biological Activities. *Digital Chinese Medicine*, 2018, 1:173-188. (Google scholar citation: 02)
20. **Zafar S**., Sier F., Samiullah, Ayoub G. Spectrophotometric Estimation of Iron (III) in Iron Polysaccharide Complex Capsule Formulation and Accelerated Stability. *Journal of the Chemical Society of Pakistan*, 2020, 42:17-22. (Google scholar citation: 00)
21. Khan, M., Ahad, G., Manaf, A., Naz, R., Hussain, S. R., Deeba, F., Shah, S., Khan, A., Ali, M., Zaman, K., **Zafar, S**., Salar, U., Hameed, A., Khan, K. M. Synthesis, *in vitro* urease inhibitory activity, and molecular docking studies of (perfluorophenyl)hydrazine derivatives. *Medicinal Chemistry Research*, 2019, 28:873-883. (Google scholar citation: 02)
22. Rahim F., Tariq S., Taha M., Ullah H., Zaman K., Uddin I., Wadood A., Khan AA., Rehman A., Uddin N., **Zafar S**., Shah SAA. New triazinoidole bearing thiazole/oxazole analogues: Synthesis, a-amylase inhibitory potential and molecular docking study. *Bioorganic Chemistry,* 2019, 92:103284. (Google scholar citation: 03)
23. **Zafar S**., Rahman IU., Khan A. Adsorption of organic dyes on non-conventional and inexpensive adsorbent. *Journal of Ongoing Chemical Research*, 2019, 4:20-23.
24. **Zafar S**., Jian Y., Bin L., Peng C-Y., Choudhary MI., Atta-ur-Rahman, Wang W. Antioxidant nature adds further therapeutic value: An updated review on natural xanthone glycosides. *Digital Chinese Medicine*, 2019, 2:166-192. (Google scholar citation: 01)
25. Raziq N., Saeed M., Ali MS., Lateef M., Shahid M., Akbar S., **Zafar S**. Muriolide, a novel antioxidant lactone from *Ranunculus muricatus*. *Natural Product Research*, 2020, 1-7 (Google scholar citation: 01)
26. Wang M., Jiang S, Yuan H., **Zafar S**., Hussain N., Jian Y. Li B., Gong L., Peng C., Liu C., Wang W. A review of the phytochemistry and pharmacology of *Kadsura heteroclita*, an important plant in Tujia ethnomedicine. *Journal of Ethnopharmcology*, 2020, 113567. (Google scholar citation: 00)
27. Nisar M., Khan SA., Gul M., Rauf A., **Zafar S**., Ramadan MF. Synthesis, characterization, and antimicrobial properties of sparfloxacin-mediated noble metal nanoparticles. *Journal of Pure and Applied Microbiology*, 2020, 14:1789-1800.
28. Raziq N., Saeed M., Ali MS., **Zafar S**. Muricazine, a new hydrazine derivative from *Ranunculus muricatus* with antioxidant, lipoxygenase and urease inhibitory activities. *Natural Product Research*, 2020, (Just Accepted)

**RESEARCH SUPERVISION**

**MS/M.PHIL THESIS SUPERVISED/CO-SUPERVISED**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.NO.** | **STUDENT** | **SUPERVISION** | **YEAR COMPLETED** |
| 1 | Irum Zaman | Co-supervised | 2016 |
| 2 | Saima Rehman | Co-supervised | 2017 |
| 3 | Farrukh Sier | Supervised | 2019 |
| 4 | Samina Yasmeen | Supervised | 2020 |
| 5 | Afsana Rashid Khan | Supervised | 2020 |

**BS/M.Sc. THESIS SUPERVISED**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.NO.** | **STUDENT** | **BS/M.Sc.** | **YEAR COMPLETED** |
| 1. 1
 | Aziz Khan | M. Sc. | 2013 |
| 1. 2
 | Noshi Alam | M. Sc. | 2013 |
|  | Muhammad Nabi | M. Sc. | 2014 |
|  | Inam-ur-Rahman | M. Sc. | 2014 |
|  | Aqsa | M. Sc. (Co-supervised) | 2015 |
|  | Abdur Rauf | M. Sc. | 2016 |
|  | Kiran | M. Sc. | 2016 |
|  | Mehwish Batool | M. Sc. | 2017 |
|  | Sabagul | M. Sc. | 2017 |
|  | Areesha Khan | M. Sc. | 2017 |
|  | Naila Khan | M. Sc. | 2019 |
|  | Nagina Aziz | M. Sc. | 2019 |
|  | Aamir Iqbal | M. Sc. | 2019 |
|  | Laiba Shah | M. Sc. | 2019 |
|  | Hadiqa Sufaid | M. Sc. | 2019 |

**REFERENCES:**

**1. Prof. Dr. Muhammad Iqbal Choudhary**

International Center for Chemical and Biological

Sciences H.E.J.R.I.C. & P.C.M.D.

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**2. Dr. Rasool Khan**

Associate Professor

Institute of Chemical Sciences,

University of Peshawar, Peshawar-25120, Pakistan.

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