



Nadeem Ahmad

Curriculum Vitae

Address House # F-50, Street No. 7A, Muhammadi Colony, Sargodha, Pakistan

Telephone +92(321) 603-2131

Email nadeemph@cuiatd.edu.pk; dr.nadeem444@gmail.com

Birth date October 19, 1986

RESEARCH INTERESTS

Pharmaceutical Chemistry, Enzyme biocatalysis, Metabolic Engineering, Cell & Molecular Biology, Drug delivery systems

PROFESSIONAL EMPLOYMENT

01/2023 - Present Assistant Professor, Department of Pharmacy, COMSATS University Islamabad, Lahore Campus.

08/2022 – 01/2023 Lecturer, Department of Pharmacy, COMSATS University Islamabad, Lahore Campus.

08/2013 – 08/2022 Lecturer, Department of Pharmacy, COMSATS University Islamabad, Abbottabad Campus.

04/2013-07/2013 Lecturer, Department of Pharmacy, The University of Faisalabad, Faisalabad, Pakistan.

Responsibilities: Lecture delivery and research in pharmaceutical sciences.

EDUCATION

2021 Ph.D. (Chemical Engineering and Technology), Beijing Institute of Technology, Beijing, China

2012 M.Phil. (Pharmaceutics), University of Sargodha, Sargodha, Pakistan

2010 Pharm.D (Doctor of Pharmacy), University of Sargodha, Sargodha, Pakistan

LICENSURE/CERTIFICATE/TRAINING

May 5-6, 2021 Gene Therapy Europe: Online by Oxford Global Conferences

Jan 15-19, 2018 Synthetic biotechnology training course for developing countries by Chinese Academy of Sciences (CAS)

Oct 22-25, 2017 Metabolic Engineering Summit, 2017, Beijing, China

- Sep 2015-July 2016 Chinese language learning program. HSK 4 level. Beijing Institute of Technology, Beijing, China
- Dec 9, 2014 Professional knowledge for ELT course and assessment in the ELTeach professional development program for English language teachers. National Geographic learning. COMSATS University Islamabad, Abbottabad Campus.
- Apr 2-6, 2012 "1st National Training Workshop on Chromatography and Mass Spectrometry". Venue: National institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan.

COMPETENT SKILLS

Soft Skills: Communication, Self- motivation, Complex problem solving, Collaboration
Critical thinking, Organization, Multitasking, Emotional intelligence.

Technical Skills:

- Instruments** Operation, handling and troubleshoot of stat-of-the-art instruments: HPLC, LCMS, GC, FTIR, Sonicator, Thermocycler, qPCR, Microscopes, UV-Vis Spectrophotometer, High pressure low temperature cell homogenizer, AKTA purification system, Safety Cabinets, Freeze dryer, Centrifuges.
- Molecular Biology** Molecular Extraction (DNA, RNA, Biomolecules), transformation, Cloning, PCR, Gel Electrophoresis, ELISA, Next Generation Sequencing (NGS), Metabolic Engineering techniques.
- Microbiology** Media preparation, Sterilization, cell culture (Bacteria, Yeast), Growth curve, Microscopy, Slide preparation, Gram staining, Antimicrobial assay.
- Bioinformatics** Plasmid design, Snapgene, Phylogenetic Analysis, Primer Design, MEGA, ClustalW, FASTA, Autodock and Autodock vina, PYMOL.
- Pharmaceutics** Drug delivery systems including Liposomes and Hydrogels.

RESEARCH EXPERIENCE

08/2016 – 07/2021 Ph.D. Scholar, School of Chemistry and Chemical Engineering, Beijing Institute of Technology, Beijing, China.

Supervisor: Professor Chun Li. Research projects regarding Metabolic Engineering, Synthetic Biology and Enzyme Engineering.

Responsibilities Mined microbial glycosyltransferases for catalytic glycosylation of Glycyrrhetic acid to yield its glycosylated derivatives; Enzyme Engineering and Metabolic Engineering to construct microbial cell factories.

09/2011 – 09/2012 M.Phil. research student, Health Biotechnology Division (HBD), National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, Pakistan.

Supervisor: Dr. Mazhar Iqbal. Worked on organic synthesis of compounds.

Responsibilities: Preparation of reagents, pharmacokinetic analysis, lab manual upgradation, data analysis, training and supervision of graduate students, interns and lab technicians.

DISSERTATIONS / THESIS

(PhD thesis) **N. Ahmad.** 2021. Synthesis of flavonoid and triterpenoid saponins by UDP-Glycosyltransferases.

(M.Phil. thesis) **N. Ahmad.** 2012. Synthesis and pharmacokinetic study of Thiazolide derivatives.

PEER-REVIEWED JOURNAL ARTICLES

1. Assad, M. Paracha, R.N. Siddique, A.B. Shaheen, M.A, **Ahmad, N.** Mustaqeem, M. Kanwal, F. Mustafa, M.Z.U. Rehman, M.F.u. Fatima, S. et al. In Silico and In Vitro Studies of 4-Hydroxycoumarin-Based Heterocyclic Enamines as Potential Anti-Tumor Agents. *Molecules.* (2023), 28, 5828. <https://doi.org/10.3390/molecules28155828> (IF=4.92)
2. Khalid, Farwa Muskan, Muhammad Ijaz, Arshad Mahmood, Muhammad Khurram Waqas, Talib Hussain, Mulazim Hussain Asim, Nadeem Ahmad, Shumaila Arshad, Masood Ur Rehman, and Imran Nazir. "Mucoadhesive, Fluconazole-Loaded Nanogels Complexed with Sulfhydryl- β -cyclodextrin for Oral Thrush Treatment." *AAPS PharmSciTech* 24, no. 7 (2023): 194. <https://doi.org/10.1208/s12249-023-02653-1> (IF=4.02)
3. Jinwei Zhang, Xu, K., XiaoPeng Gao, Zhang, Y.-f., Guo, D.-y., Qin, L., Ashraf, M., **Ahmad, N** & C. Li. Recent advances in yeast genome evolution with stress tolerance for green biological manufacturing. *Biotechnology and Bioengineering*, (2022). 1–9. <https://doi.org/10.1002/bit.28183> (IF=4.50)
4. M. Tahir, **N. Ahmad**, D. Lei, S. Ali. Emerging role of oncolytic viruses and stem cells in gene therapy: should they be integrated?, *Drug Discovery today.* (2022). <https://doi.org/10.1016/j.drudis.2022.03.016>. (IF=8.36)
5. A.M. Alkhadrawi, H. Xue, **N. Ahmad**, M. Akram, Y. Wang, C. Li, Molecular study on the role of vacuolar transporters in glycyrrhetic acid production in engineered *Saccharomyces cerevisiae*, *Biochim. Biophys. Acta - Biomembr.* 1864 (2022) 183890. <https://doi.org/10.1016/J.BBAMEM.2022.183890>. (IF=4.0)
6. M. Rasheed, R. Asghar, S. Firdoos, **N. Ahmad**, A. Nazir, K.M. Ullah, N. Li, F. Zhuang, Z. Chen, Y. Deng, A Systematic Review of Circulatory microRNAs in Major Depressive Disorder: Potential Biomarkers for Disease Prognosis, *Int. J. Mol. Sci.* 23 (2022). <https://doi.org/10.3390/IJMS23031294>. (IF=6.20)
7. H.R. Hussain, S. Bashir, A. Mahmood, R.M. Sarfraz, M. Kanwal, **N. Ahmad**, H.S. Shah, I. Nazir, Fenugreek seed mucilage grafted poly methacrylate pH-responsive hydrogel: A promising tool to enhance the oral bioavailability of methotrexate, *Int. J. Biol. Macromol.* 202 (2022) 332–344. <https://doi.org/10.1016/J.IJBIOMAC.2022.01.064>. (IF=8.0)
8. Liaqat, M., I. U. Kakar, M. Akram, S. Hussain, M. U. Kakar, **N. Ahmad**, and R. Faryal. "Antimicrobial and phytochemical exploration of *duchesnea indica* plant". *Plant cell biotechnology and molecular biology*, vol. 22, no. 49-50, sept. (2021), pp. 74-85, <https://www.ikppress.org/index.php/pcbmb/article/view/6951>

9. X. Gao, K. Xu, **N. Ahmad**, L. Qin, C. Li, Recent advances in engineering of microbial cell factories for intelligent pH regulation and tolerance, *Biotechnol. J.* (2021) [2100151](https://doi.org/10.1002/BIOT.202100151). <https://doi.org/10.1002/BIOT.202100151>. (IF=5.72)
10. H.-R. Liu, **N. Ahmad**, B. Lv, C. Li, Advances in production and structural derivatization of the promising molecule ursolic acid, *Biotechnol. J.* (2021) 2000657. <https://doi.org/10.1002/BIOT.202000657>. (IF=5.72)
11. K. Xu, Y. jia Zhao, **N. Ahmad**, J. nan Wang, B. Lv, Y. Wang, J. Ge, C. Li, O-glycosyltransferases from *Homo sapiens* contributes to the biosynthesis of Glycyrrhetic Acid 3-O-mono- β -D-glucuronide and Glycyrrhizin in *Saccharomyces cerevisiae*, *Synth. Syst. Biotechnol.* 6 (2021) 173–179. <https://doi.org/10.1016/J.SYNBIO.2021.07.001>. (IF=4.69)
12. **N. Ahmad**, K. Xu, J. nan Wang, C. Li, Novel catalytic glycosylation of Glycyrrhetic acid by UDP-glycosyltransferases from *Bacillus subtilis*, *Biochem. Eng. J.* 162 (2020) 107723. <https://doi.org/10.1016/j.bej.2020.107723>. (IF=4.44)

AFFILIATIONS / MEMBERSHIPS

2010 – Present	Pharmacy Council Pakistan
2011 – Present	Biofertilizer Society of Pakistan, NIBGE

AWARDS/HONOURS

2015	CSC (Chinese Scholarship Council) Scholarship for Ph.D.
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LANGUAGES

English	Excellent in speaking, listening, writing and reading
Chinese	Good in speaking, listening and reading Mandarin Chinese (HSK4 certified).
Urdu	Native
Punjabi	Native

REFERENCES

1. Professor Dr. Li Chun (李春教授)

Institute of Biotransformation and synthetic biosystem, School of Chemistry and Chemical Engineering,
Beijing Institute of Technology (BIT), Beijing, China
Tel: +86 158 1068 4649
Email:lichun@bit.edu.cn

2. Dr. Mazhar Iqbal

Principal scientist & Group leader,
Drug Discovery Lab, Health Biotechnology division,
National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad (38,000), Pakistan
Tel: +92 41 257 3992; Mobile: +92 306 711 1810;
Fax: +92 41 265 1472 Email:migondal@nibge.org

3. Professor Dr. Sajid Bashir

Dean,
Faculty of Pharmacy,
University of Sargodha, Sargodha, Pakistan
Tel: +92 48 923 0807; Mobile: +92 300 938 9717;
Email:sajidpharm@gmail.com