



Name: Dr. Ashok Kumar Yadav

Highest Qualification: Ph. D.

Years of experience in the department: >5

- **Motivational quote** “Success consists of going from failure to failure without loss of enthusiasm”- Winston Churchill.
- **Research Area**  
Development of new synthetic methodology, API synthesis and Process development, Development of new biologically active molecules against Diabetes Mellitus, Cancer, and bacterial infection and further to find out their applications for the development of drugs.

#### **Google scholar accounts link:**

<https://scholar.google.com/citations?hl=en&user=T4Gf26IAAAAJ&scilu=&scisig=AMD79ooAAAAAX8jQaD1T0We1mnGcRETA0ly5iaD9KYvK&gmla=AJsN-F4RcnxaC0kE>  
<https://scholar.google.com/citations?hl=en&user=T4Gf26IAAAAJ&scilu=&scisig=AMD79ooAAAAAX8jQaD1T0We1mnGcRETA0ly5iaD9KYvK&gmla=AJsN-F4RcnxaC0kE#cita>  
<https://scholar.google.com/citations?hl=en&user=T4Gf26IAAAAJ&scilu=&scisig=AMD79ooAAAAAX8jQaD1T0We1mnGcRETA0ly5iaD9KYvK&gmla=AJsN-F4RcnxaC0kE#pub>

#### **Academic Appointments:**

**2018-Present:** UGC Assistant Professor, UIPS, Panjab University, Chandigarh, India

**2014-2017:** DST Fast Track Young Scientist, Centre of Biomedical Research (CBMR), Lucknow, India

**2013-2014:** Senior Research Scientist, Dr Rawat Institute of Life Sciences, Lucknow, India

**2012-2013:** Postdoctoral Research Fellow, Institut für Organische Chemie, Universität Leipzig, Germany

**2010-2012:** Postdoctoral Research Fellow, Department of Chemistry, Antwerp University, Belgium

**2008-2010:** Ext. SRF/RA, Department of Chemistry, Indian Institute of Technology, Kanpur, India

#### **Education:**

**2002-2008:** Ph. D., Department of Chemistry, Indian Institute of Technology, Kanpur, India.  
Degree was obtained from UP Technical University, Lucknow

**1997-1999:** M. Sc., University of Lucknow, Lucknow, India

**1994-1997:** B. Sc., University of Lucknow, Lucknow, India

**Research Guidance:**

Ph. D. Students: 01 (completed) + 02 Supervising

M. Pharm. Students: 07 (completed) + 06 Supervising)

**Awards/Honors:**

- CSIR NET in Dec. 2000
- GATE in 2001
- CSIR Ext. SRF in 2008
- CSIR RA in 2010
- UGC-Faculty Recharge Program (FRP) Awardee, Govt. of India (2016) as UGC-Assistant Professor

**Research Projects:****Completed Research Project:**

i. DST Fast Track Young Scientist (From-To): 02.09.2014 – 13.10.2017 (**PI**)

**Title:** Diastereoselective and Enantioselective Intramolecular Cyclization Reactions of Aldimines Catalyzed by Chiral Bronsted Acids.

ii. UGC-Start-up Research Grant (From - To): 27.09.2018 – 30.03.2022 (**PI**).

iii. Department of Science & Technology & Renewable Energy, Chandigarh, Administration (05.02.2021-04.02.2022) (**PI**).

**Title:** Synthesis and Biological Evaluation of 2-and 1-Amino-quinolines and Isoquinolines as active antimicrobials.

iv. Department of Science & Technology & Renewable Energy, Chandigarh, Administration (28.10.2021-27.10.2022) (**Co-PI**).

**Title:** Development of Lignin Based Targeted Polymeric Nanoparticle Platform for Efficient Delivery of Anticancer Drug.

**Publications:**

1. A. Vashistha; N. Sharma; Y. Nanaji; D. Kumar; G. Singh; R. P. Barnwal; A. K. Yadav; Quorum sensing inhibitors as Therapeutics: Bacterial biofilm inhibition. *Bioorg. Chem.* **2023**, *136*, 106551, <https://doi.org/10.1016/j.bioorg.2023.106551>.
2. P. Dey; A. Ahuja; J. Panwar; P. Choudhary; S. Rani; M. Kaur; A. Sharma; J. Kaur; A. K. Yadav; V. Sood; A. R. S. Babu; S. K. Bhadada; G. Singh; R. P. Barnwal; Immune

- control of avian influenza virus infection and its vaccine development. *Vaccines* **2023**, *11*(3), 593; doi.org/10.3390/vaccines11030593.
- 3. N. Sharma, N. Srivastava, B. Devi, L. Kumar, R. Kumar, A. K. Yadav; Synthesis, biological evaluation and in silico study of N-(2- and 3-pyridinyl) benzamide derivatives as quorum sensing inhibitors against *Pseudomonas aeruginosa*. *Chem. Biodiversity* **2023**, *20*, e20220119. doi.org/10.1002/cbdv.202201191
  - 4. K. Pathania, S. P. Sah, D. B. Salunke, M. Jain, A. K. Yadav, V. G. Yadav, S. V. Pawar; Green synthesis of lignin-based nanoparticles as a bio-carrier for targeted delivery in cancer therapy. *International Journal of Biological Macromolecules* **2023**, *229*, 684-695
  - 5. A. Vashistha, S. Kumar, S. Kirar, N. Sharma, B. Das, U. C. Banerjee, S. V. Pawar, R. Kumar, A. K. Yadav, Synthesis, biological evaluation and in silico studies of 2-aminoquinolines and 1-aminoisoquinolines as antimicrobial agents. *Computational Biology and Chemistry* **2023**, *102*, 107807
  - 6. K. Razdan, S. Kanta, E. Chaudhary, S. Kumari, D. K. Rahi, A. K. Yadav, V. R. Sinha; Levofloxacin loaded clove oil nanoscale emulgel promotes wound healing in *Pseudomonas aeruginosa* biofilm infected burn wound in mice. *Colloids and Surfaces B: Biointerfaces*, **2023**, *222*, 113113.
  - 7. D. P. S Loona, B. Das, R. Kaur, R. Kumar, A. K. Yadav; Free Fatty Acid Receptors (FFARs): Emerging Therapeutic Targets for the Management of Diabetes Mellitus. *Curr Med Chem.* **2022**, Sep 27. doi: 10.2174/0929867329666220927113614
  - 8. B. Das, A. T. K. Baidya, A. T. Mathew, A. K. Yadav, R. Kumar; Structural modification aimed for improving solubility of lead compounds in early phase drug discovery. *Bioorg. Med. Chem.* **2022**, *56*, 116614, doi.org/10.1016/j.bmc.2022.116614
  - 9. R. Kaur, R. Kumar, N. Dogra; A. K. Yadav; Design, synthesis, biological evaluations and in silico studies of sulfonate ester derivatives of 2-(2-benzylidenehydrazone)thiazolidin-4-one as potential  $\alpha$ -glucosidase inhibitors. *J. Mol. Struct.* **2022**, *1247*, 131266; (doi.org/10.1016/j.molstruc.2021.131266).

10. R. Kaur, S. Mandal, D. Banerjee, A. K. Yadav, Transition Metal Free  $\alpha$ -C-H Functionalization of Six membered Heteroaromatic-N-Oxides. *ChemistrySelect* **2021**, *6*, 2832 -2854 (DOI: 10.1002/slct.202100319)
11. R. Kaur, R. Kumar, N. Dogra; A. Kumar; A. K. Yadav; M. Kumar; Synthesis and studies on Thiazolidinedione-Isatin Hybrids as  $\alpha$ -Glucosidase Inhibitors for management of diabetes. *Future Med. Chem.* **2021**, *13*, 457-485 (doi.org/10.4155/fmc-2020-0022).
12. A mild and metal-free synthesis of 2- and 1-alkyl/aryl/dialkyl-aminoquinolines and isoquinolines. Y. Nanaji, S. Kirar, S. V. Pawar, A. K. Yadav *RSC Adv.*, **2020**, *10*, 7628.
13. 2,6-Di(Arylamino)-3-Fluoropyridine (DAFPYRID) Derivatives as HIV Non-Nucleoside Reverse Transcriptase Inhibitors. S. Sergeyev, A. K. Yadav, P. Frank, J. Michiels, P. Lewi, J. Heeres, G. Vanham, K. K. Ariën, B. U. W. Maes *J. Med. Chem.* **2016**, *59*, 1854.
14. Modular, flexible, and stereoselective synthesis of pyrroloquinolines-Rapid assembly of complex heterocyclic scaffolds. M. Boomhoff, A. K. Yadav, J. Appun, C. Schneider *Org Lett.* **2014**, *16*, 6236.
15. Antiprotozoal activity of synthetic amino substituted 1-methyl-1H- $\alpha$ -carbolines. S. Verbeeck. A. K. Yadav, B. U.W. Maes, K. Augustyns, P. Van der Veken, P. Cos, L. Maes, L. Pieters *Pharmazie* **2014**, *69*, 83.
16. “Base Effect” in the Auto Tandem Pd-Catalyzed Synthesis of Amino Substituted 1-methyl-1H- $\alpha$ -carbolines. A. K. Yadav, Stefan Verbeeck, Steven Hostyen, P. Franck, S. Sergeyev, Bert U. W. Maes *Org. Lett.* **2013**, *15*, 1060.
17. MOC Concept in imino-aldol reaction: Enantioselective synthesis of  $\alpha,\beta$ -diamino esters and aziridines. M. K. Ghorai, K. Ghosh, A. K. Yadav, Y. Nanaji, S. Halder, M. Sayyad *J. Org. Chem.* **2013**, *78*, 2311.
18. Ring opening/C–N cyclization of activated aziridines with carbon nucleophiles: highly diastereo- and enantioselective synthesis of tetrahydroquinolines. Manas K. Ghorai, Nana Ji, A. K. Yadav *Org. Lett.*, **2011**, *13*, 4256.
19. A novel radical cyclization approach to thieno-fused heterocycles. P. P. Singh, A. K. Yadav, H. Ila, and H. Junjappa *Eur. J. Org. Chem.* **2011**, *4001*.

20. On the importance of an acid additive in the synthesis of pyrido[1,2-a]benzimidazoles by direct copper-catalyzed amination. K.-S. Masters, T. R. M. Rauws, A. K. Yadav, W. A. Herrebout, B. Van der Veken, and Bert U. W. Maes *Chem. Eur. J.* **2011**, *17*, 6315.
21. Synthesis of novel substituted phenanthrenes and polycyclic heteroarenes *via* palladium-catalyzed intramolecular direct arylation/heteroarylation. A. K. Yadav; H. Ila and H. Junjappa *Eur. J. Org. Chem.* **2010**, 338.
22. Novel route to 2,3-substituted benzo[*b*]thiophenes *via* intramolecular radical cyclization. Prabal P. Singh; A. K. Yadav; H. Ila and H. Junjappa *J. Org. Chem.* **2009**, *74*, 5496.
23. Enantioselective synthesis of  $\alpha,\beta$ -diamino ester derivatives: memory of chirality in imino-aldol reactions. Manas K. Ghorai; Koena Ghosh; A. K. Yadav *Tetrahedron Lett.* **2009**, *50*, 476.
24. A new one-pot three component synthesis of 2,3,5-substituted/annulated-6-(methylthio)pyridines. A. K. Yadav; S. K. S. Yadav; I. Siddiqui; S. Peruncheralathan; H. Ila and H. Junjappa *Synlett* **2008**, 2674.
25. Domino carbocationic rearrangement of  $\alpha$ -[bis(methylthio)methylene]-alkyl-2-(3/2-indolyl)cyclopropyl ketones. A. K. Yadav; S. Peruncheralathan; H. Ila and H. Junjappa *J. Org. Chem.* **2007**, *72*, 1388.
26. Synthesis of novel 3-aryl(cyclopenta[c]quinolines *via* acid-induced domino cyclization of 2-arylamino-2-methylthioethenyl 2-arylcyclopropyl ketones. S. K. S. Yadav; A. K. Yadav; G. S. M. Sundaram; H. Ila and H. Junjappa *ARKIVOC* **2007** (*viii*) 231.
27. Highly regioselective synthesis of 1-aryl-3 (or 5)-alkyl/aryl-5 (or 3)-(N-cycloamino)pyrazoles. S. Peruncheralathan; A. K. Yadav; H. Ila and H. Junjappa *J. Org. Chem.* **2005**, *70*, 9644.
28. Heteroaromatic annulation studies on 2-[bis(methylthio)methylene]-1-methyl-3-oxoindole: synthesis of novel heterocyclo[*b*]fused indoles. U. K. Syam Kumar; A. K. Yadav; C. Venkatesh; H. Ila and H. Junjappa *ARKIVOC* **2004** (*viii*) 20.

**Books/Book Chapters:**

1. **Book Chapter:** Biological and Clinical Perspectives of Nano Quantum Dots for Cancer. Bakul Tikoo, Gagandeep Singh, Ashok Kumar Yadav, Rajiv Kumar, Gurpal Singh, Ashish Suttee. **Book Title:** Smart Nanotechnology with

Applications, ISBN 9780367563165, December 15, 2020, Forthcoming by CRC Press (Taylor & Francis Group). (<https://www.routledge.com/Smart-Nanotechnology-With-Applications/Bhargava-Sachdeva-Sharma/p/book/9780367563165>)

2. **Book Chapter:** Animal Models for Probiotic Interventions Under Gut Inflammatory Conditions. Priyanka Devi Yerramsetti Nanaji, Nikita Khanna, Ashok Kumar Yadav, Sandip V. Pawar. **Book Title:** Rishi P. (eds) Probiotic Research in Therapeutics. Springer, Singapore. ISBN 978-981-33-6235-2, 02 February 2021, [https://doi.org/10.1007/978-981-33-6236-9\\_4](https://doi.org/10.1007/978-981-33-6236-9_4)

#### Symposia / Workshop attended:

1. 89<sup>th</sup> Indian Science Congress at University of Lucknow, Lucknow from 3-4 January 2002.
2. On the importance of an acid additive in the synthesis of pyrido[1,2-a]benzimidazoles through directed copper-catalyzed amination. Ashok K. Yadav, Bert U. W. Maes; Poster Presentation at 15<sup>th</sup> Sigma-Aldrich Organic Synthesis meeting in SPA, Belgium on 1<sup>st</sup> and 2<sup>nd</sup> Dec. 20011.
3. 13<sup>th</sup> Chandigarh Science Congress “Science and Technology for new India, March 13-15, 2019.
4. National Symposium on Innovation and Entrepreneurship, organized by University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh on 9<sup>th</sup> April 2019.
5. ICONICA 2020, A global summit on next-gen paradigms in health care, Panjab University, Chandigarh, India-, 12-14 February 2020.
6. A three-day national webinar on Frontiers in Chemistry: From Fundamentals to Applications on 25-26 and 28 September 2020.
7. Society of young biomedical scientists, India: 3<sup>rd</sup> National biomedical research competition NBRCOM 2021 held 6-10<sup>th</sup> December 2021. **SYBS awarded rank 1 in pharmaceutical sciences category to our work entitled “Synthesis and biological evaluation of 2-aminoquinolines and 1-aminoquinolines”.**
8. 15<sup>th</sup> Chandigarh Science Congress “Towards holistic development of Science and Technology through interdisciplinary approach” for poster presented on the topic

Development of Flavonoid-Porphyrin Conjugate-Based Photosensitizers for Therapeutic Applications: An Interdisciplinary Approach on September 15-17, 2022

**Open Position:**

Currently, open positions for Ph. D./Post-doc are available. Candidate having JRF/SRF can contact directly. Master/Ph. D. degree holders, who are interested to apply for DST inspire fellowship/DST N-PDF or any other funding for Ph.D/post-doc positions are encouraged to send their CV for the support of their application.

**Contact Information:**

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