

Sheikh Murtuja, Ph.D

Email: murtzasheikh09@gmail.com

Linkedin ID: [linkedin.com/in/sheikhmurtaza](https://www.linkedin.com/in/sheikhmurtaza)

Google Scholar: <https://scholar.google.com/citations?user=Obo4i58AAAAJ&hl=en&oi=ao>

Contact No: +91 9990655483, 9873133559



CAREER SUMMARY:

I am a passionate researcher and academician with experience in drug design and discovery, having command in rational drug design and structure based drug design. I have experience of small molecule synthesis. Besides this I have experience in characterization of the synthesized molecules by IR, NMR and Mass spectroscopy. I also have experience of purification of compounds by column chromatography and crystallization. Further I have gained experience in the in silico aspect of drug design and have used docking tools like AutoDock. My teaching experience of over a decade further helped me in gaining insight of fundamentals of organic and medicinal chemistry, I also have the experience of teaching students for competitive exams pertaining to pharmaceutical sciences. I am looking forward for working in an organization where I could apply my research and teaching experience and grow in alignment with the organizations vision and objective.

PROFESSIONAL QUALIFICATIONS:

- | | |
|-------------------------------------|---|
| Ph.D | 2017-2022
Department of Pharmaceutical Sciences & Technology
Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India,
835215
Thesis title: “Design and development of antiviral agents for the treatment of dengue viral infection” |
| M. Pharm.
(Pharm. Chem.) | 2008-2010
Jamia Hamdard, (Hamdard University), New Delhi, India
Marks Obtained: 70.83%
Thesis title: “Synthesis and Anticonvulsant Activities of some new Benzothiazole derivatives” |
| B. Pharm. | 2003-2007
Luqman College of Pharmacy, Gulbarga, Karnataka, India
Rajiv Gandhi University of Health Sciences, Karnataka,
Bangalore.
Marks Obtained: 69.07% |

RESEARCH AND TECHNICAL SKILLS:

- **Organic synthesis:** Expertise in carrying out various organic synthetic procedures including metal catalyzed reactions and development of methodologies for organic synthesis. Good expertise in purification of organic compounds using crystallization and distillation (at atmospheric and reduced pressures) and chromatographic techniques such as column chromatography, preparative TLC.
- **Structural elucidation:** Well versed with structural elucidation FT-IR, ¹H NMR, ¹³C NMR and Mass spectroscopy
- **Computational Expertise:** Designing and planning of docking studies: HTVS using Schrodinger, Molecular Modelling using techniques of Structure based drug design – Molecular Docking (AutoDock), Molecular Dynamics (Desmond)
- **Operation of Instrumentation:** UV- Spectrophotometer, IR, and Rota-evaporator (Buchi).
- **Computer skills & Softwares:** Working knowledge of MS Office (Word, Excel, Power point, Publisher), Handling of online databases like ZINC, ProDrg, SwissADME, pKCSM, PDB, RCSB. Chemistry software like ACD/chemsketch 12.0, Chemdraw 19.0, ISIS draw, Discovery Studio Visualizer, Maestro visual interface and Chimera. Scientific data retrieval from portals like Sci-finder, PubMed, Science direct and Google scholar. Crystal Structure Elucidation using software OLEX-2, SHELEXL, ORTEP3, and MERCURY programs. Hirshfield surface analysis using Crystal Explorer 17.5

RESEARCH/ PROFESSIONAL EXPERIENCES:

- Worked as JRF in the **SERB EMR** (Individual Centric, 2017-18) project entitled “**Design and Synthesis of Substrate Based Peptide Inhibitors of DENV Protease for the Treatment of Dengue Viral Infections**” in the Department of Pharmaceutical Sciences and Technology, Birla Institute of Technology, Mesra, Ranchi.
 - **Duration:** October 2017 – August 2020
- **TEACHING EXPERIENCE**
 1. Currently working as an Associate professor at Department of Pharmaceutical Technology, ADAMAS University, Barasat, Kolkata, West Bengal, India from **1st Sep 2023**.
 2. Worked as an Associate professor at Palamau Institute of Pharmacy, Daltonganj, Jharkhand, India from **1st Sep 2022 to 31st Aug 2023**.
 3. Worked as an Assistant Professor in Krishna Institute of Engineering and Technology (**KIET**), Murad Nagar, Ghaziabad, U.P, India (**13th August 2010 to 27th December 2016**).

Total Experience: 8 years and 6 month

Subjects taught at B.Pharm level: Inorganic pharmaceutical chemistry, Physical

pharmacy, Organic chemistry, Pharmaceutical analysis, Medicinal chemistry. (With special emphasis on teaching for competitive exam at national level, **GPAT** exam).

- Assisted in development of lab curriculum and Updated and revised existing lab assignments taken at teaching level
- Guided students with multi-step synthesis of drugs designed to teach general Laboratory techniques etc.
- Taught the basic and advanced courses of organic chemistry including reaction mechanism, name reactions and rearrangements.
- Prepared teaching materials including problem sets and exams.
- Assisted students individually with homework problems or material they found difficult to understand.
- Supervised and instructed students in organic chemistry techniques. Emphasized keeping complete and accurate scientific notes.
- Demonstrated various techniques of organic chemistry practical like crystallization, distillation, filtration etc. to students.
- Guided students for small projects as a part of Practice School programs.
- Motivated and guided students to appear for competitive exam.

Subjects taught at M.Pharm level: Pharmaceutical Biotechnology, Regulatory affairs, Handled journal club classes.

PROFESSIONAL MEMBERSHIP:

1. Registered Pharmacist; Registered at Delhi Pharmacy Council, INDIA (Regn No:21347)
2. Association of Pharmaceutical Teachers of India (Member ID is WB/ASM-2)

PUBLICATION:

1. Tripathi S, **Murtuja S**, Siddique MU, Ansari A, Rakshit G. Inhibitory Potency of Chlorogenic Acid from Apple Cider Vinegar Against Alzheimer's Disease: Molecular Docking and Dynamics Validation. Journal of the American Nutrition Association. 2024 Nov 7:1-6. (**Impact factor: 3.4,Q2**)
2. **Murtuja S**, Siddique MU, Srivastava KP, Agarwal YO, Wagh S, Yasmin S, Ansari A, Shaikh MS, Hasnain MS, Goyal SN. Identifying Novel Inhibitors for Dengue NS2B-NS3 Protease by Combining Topological similarity, Molecular Dynamics, MMGBSA and SiteMap Analysis. Current computer-aided drug design. 2024 Oct 29. (**Impact factor: 1.5,Q3**)
3. Basavanakatti VN, Ali M, Bharathi DR, **Murtuja S**, Sinha BN, Jayaprakash V, Shakeel F. Development and validation of HPLC-UV and LC-MS/MS methods for the quantitative determination of a novel aminothiazole in preclinical samples. BMC Chemistry. 2024 Nov 7;18(1):220. (**Impact factor: 4.3,Q2**)

4. Alshati F, Alahmed TA, Sami F, Ali MS, Majeed S, **Murtuja S**, Hasnain MS, Ansari MT. Guest-Host Relationship of Cyclodextrin and Its Pharmacological Benefits. *Current Pharmaceutical Design*. 2023. (**Impact factor: 3.31,Q2**)
5. **Murtuja S**, Jayaprakash V, Sinha BN. Synthesis, crystal structure, and Hirschfeld surface analysis of novel ethyl 5-bromo-2-(4-methoxyphenyl) oxazole-4-carboxylate. *Journal of Pharmaceutical Chemistry*. 2023 Jul 11;9.
6. Dagur P, Rakshit G, **Sheikh M**, Biswas A, Jha P, Al-Khafaji K, Ghosh M. Target prediction, computational identification, and network-based pharmacology of most potential phytoconstituent in medicinal leaves of *Justicia adhatoda* against SARS-CoV-2. *Journal of Biomolecular Structure and Dynamics*. 2022 Mar 28:1-7. (**Impact factor: 5.235,Q2**)
7. Robertson I, Hau TW, Sami F, Ali MS, Badgular V, **Murtuja S**, Hasnain MS, Khan A, Majeed S, Ansari MT. The science of resveratrol, formulation, pharmacokinetic barriers and its chemotherapeutic potential. *International Journal of Pharmaceutics*. 2022 Feb 26:121605. (**Impact factor: 6.510,Q1**)
8. **Sheikh M**, Shilkar D, Sarkar B, Sinha BN, Jayaprakash V. A Critical Observation on the Design and Development of Reported Peptide Inhibitors of DENV NS2B-NS3 Protease in the Last Two Decades. *Mini reviews in medicinal chemistry*. 2021 Nov 1. (**Impact factor: 3.737,Q2**)
9. **Murtuja S**, Shilkar D, Sarkar B, Sinha BN, Jayaprakash V. A short survey of dengue protease inhibitor development in the past 6 years (2015–2020) with an emphasis on similarities between DENV and SARS-CoV-2 proteases. *Bioorganic & Medicinal Chemistry*. 2021 Nov 1;49:116415. (**Impact factor: 3.461,Q2**)
10. **Murtuja S**, Shaquiquzaman M, Amir M. Design, Synthesis, and screening of hybrid benzothiazolyl-oxadiazoles as anticonvulsant agents. *Letters in Drug Design & Discovery*. 2018 Apr 1;15(4):398-405. (**Impact factor: 1.15,Q3**)
11. Kumar Puspendra, Singh Jyotshna, Patel Durgawati, Singh Mary, Shikha, Alam Sanjar,**Murtuja Sheikh**, Chauhan Sanjeev, Physico-Chemical, Elemental and Antioxidant Investigation of *Boerhavia diffusa* L , *International Journal of Pharmacognosy and Phytochemical Research* ISSN: 0975-4873 ; V8,I-7,2016
12. Abhishek Chandra, **Sheikh Murtuja**, Nitesh Chauhan, Puspendra Kumar, Sanjar Alam, Surya Prakash, Analytical methodology for authentication of Ropinirole using HPLC and FT-IR,*International Journal Of Drug Development And Research*, ISSN 0975-9344, V-7,I-1 , 2015
13. Kumar Puspendra, Patel Durgawati, **Murtuja Sheikh**, Sanjeev Chauhan, Chauhan Nitesh,Alam Sanjar, Determination Of Essential And Potentially Toxic Elements By ICP-OES Method Of Panchsakar Churna: An Ayurvedic Formulation. *International Journal Of Drug Development And Research*,ISSN 0975-9344, V-7,I-1 ,2015
14. Kiran Sharma, Ashu Mittal, **Sheikh Murtuja**, Priyanka Agrahari, Investigating The Potential Of Aloe Vera As Penetration Enhancer For Transdermal Delivery,*International Bulletin Of Drug Research*,5(8):41-50,2015.

15. Formulation And Evaluation Of Meloxicam Microspheres Using Eudragits-100, Namrata Singh, Ashu mittal, Sanjeev Chauhan, **Murtuja Sheikh**, Sanjar Alam , International Journal For Pharmaceutical Research Scholar, ISSN No:2277-7873, V-3, I-2, 2014.
16. Shruti Singh, Ashu Mittal, **Sheikh Murtuja**, Uma Kant Bajaj, Sanjar Alam, Techniques Used For Development Of Aqueous Polymeric Dispersion. International Journal Of Nano Studies And Technology, ISSN:2167-8685. 3:202, (2014)

MANUSRIPT COMMUNICATED:

1. **Murtuja S**, Das S, Jana ID, Shilkar D, Rakshit G, Sarkar B, Sinha BN, Dewangan RP, Mondal A, Jayaprakash V. Identification of novel thiazole derivatives as flaviviral protease inhibitors against DENV and JEV. bioRxiv. 2024:2024-11. (submitted in Antimicrobial agents and Chemotherapy)

BOOKS & BOOK CHAPTERS:

1. Sanjar Alam, Puspendra Kumar, **Sheikh Murtuja**, Abul Barkat, Farhan J. Ahmad “GPAT Cracker” 5th Edition, **Piyush Publications**, New Delhi, 2023. (**A comprehensive book for PG entrance exam, GPAT**)
2. **Murtuja S**, Shilkar D, Sarkar B, Sinha BN, Jayaprakash V. Identification of Dengue NS2B-NS3 Protease Inhibitors Through High-Throughput Virtual Screening—Impacts on Drug Development Against the Dengue Virus. In Human Viruses: Diseases, Treatments and Vaccines 2021 (pp. 93-120). **Springer**, Cham.
3. Ansari MT, **Murtuja S**, Ahsan MN, Hasnain MS, Nayak AK. Chitosan as a responsive biopolymer in drug delivery. In Chitosan in Drug Delivery 2022 Jan 1 (pp. 389-410). **Academic Press**.
4. Moharir KS, Kurakula M, Kale V, Kenawy ER, **Murtuja S**, Ahsan MN, Hasnain MS, Nayak AK. Biomedical applications of electrospun chitosan nanofibers. In Chitosan in Biomedical Applications 2022 Jan 1 (pp. 75-110). **Academic Press**.
5. Rakshit G, **Murtuja S**, Kumar BK, Murugesan S, Jayaprakash V. Structure-based drug design (SBDD). In Computer Aided Drug Design (CADD): From Ligand-Based Methods to Structure-Based Approaches 2022 Jan 1 (pp. 181-229). **Elsevier**.
6. Ansari A, Sheriker A, Siddique MU, Patil M, Goyal SN, **Murtuja S**, Ahsan MN, Hasnain MS, Nayak AK. Cancer targeting by tailor-made polysaccharides. In Tailor-Made Polysaccharides in Drug Delivery 2023 Jan 1 (pp. 347-376). **Academic Press**.
7. Biswas A, Ghosh I, Rakshit G, **Murtuja S**, Dagur P, Jayaprakash V. Application of artificial intelligence and machine learning in natural products-based drug discovery. In Phytochemistry, Computational Tools and Databases in Drug Discovery 2023 Jan 1 (pp. 335-355). **Elsevier**.
8. Rakshit G, Dagur P, Biswas A, **Murtuja S**, Jayaprakash V. Molecular docking and molecular dynamics in natural products-based drug discovery. In Phytochemistry,

Computational Tools and Databases in Drug Discovery 2023 Jan 1 (pp. 195-212). Elsevier.

SELECTED CONFERENCE PRESENTATIONS:

1. Presented a poster entitled “**Design, development and in-silico evaluation of DENV protease inhibitors based on modification of Lai et al. potent molecule**” at International Conference on Emerging Trends in Drug Discovery and Development (ICETD3-2022) a two-day summit of talks, activities, and workshop, BIT Mesra, Ranchi 20 -21 Jan 2022.
2. Presented power point presentation entitled “**Design and development of Antivirals against Dengue Viral Infection**” in Online **Doctoral Colloquium** held at Birla Institute of Technology, Mesra on 30th January, 2021.
3. Presented poster entitled “**Design and Development of Dengue protease Inhibitors**” at **International Conference on Drug Discovery 2020 (ICDD 2020)**. BITS-Hyderabad, 29th Feb. - 2nd Mar. 2020

CONFERENCE PROCEEDINGS:

1. Mohd. Amir, **Sheikh Murtuja**, Mohd. Zaheen Hassan, Design and synthesis some newer benzothiazole derivatives as anticonvulsant agents, International Journal of Pharma and Bio Sciences ISSN 0975 – 6299, Proceedings of AICTE Sponsored National Seminar on New Horizons in Drug Discovery And Development - September 17th and 18th, 2011.
2. Rakshit G, **Murtuja S**, Jayaprakash V. Design, development, and insilico study of pyrazoline based mycobactin analogs as anti-tubercular agents. InChem. Proc 2021 Nov 14.

AWARDS & ACHEIVEMENTS:

1. Qualified GATE-2008 with **96.82** Percentile Score in Pharmaceutical Sciences conducted by: Indian Institute of Science, Bangalore,
2. Association of Pharmaceutical Teachers of India (Member ID is **WB/ASM-2**)

CONFERENCES/SEMINARS/WORKSHOPS ORGANIZED/ATTENDED/PARTICIPATED:

1. Attended, National Workshop on '**Unraveling the Path from Protein Targets to Drug Development: Exploring Computational Biology**' 28th September -1st October, 2023 organized by the Department of Pharmaceutical Technology, School of Health and Medical Sciences, Adamas University, Kolkata, India.
2. Presented a poster entitled “**Design, development and in-silico evaluation of DENV protease inhibitors based on modification of Lai et al. potent molecule**” at International Conference on Emerging Trends in Drug Discovery and Development (ICETD3-2022) a two-day summit of talks, activities, and workshop, BIT Mesra,

Ranchi 20 -21 Jan 2022.

3. Participated in Cloud-based hands-on workshop on "**Computational Chemistry, Molecular Modeling, Drug Design, and Biologics**", on 21st to 23rd Dec 2021. jointly organized by Schrödinger and Birla Institute of Technology - Ranchi
4. Attended **Indo-Australian Web-Symposium on Recent Advances in Drug Development** 02nd& 3rd September 2021,
5. Presented power point presentation entitled "**Design and development of Antivirals against Dengue Viral Infection**" in Online **Doctoral Colloquium** held at Birla Institute of Technology, Mesra on 30th January, 2021.
6. Attended seven days International Workshop on "**Tools and Techniques to Perform Molecular Modelling and Computer-Aided Drug Design**".(MMTT-2021) January 11-17, 2021
7. Attended ACS on campus webinar, virtual event on 10th August 2020.
8. Attended Webinar on "**Cell-wall peptidoglycan metabolism in "Mycobacterium tuberculosis: Achilles' heel for the TB-causing pathogen"**", 26th may 2020.
9. Attended Webinar on "**The use of biochemical and biophysical techniques to identify molecularly-targeted anti-tubercular agents**" 26th may 2020.
10. Presented poster entitled "**Design and Development of Dengue protease Inhibitors**" at **International Conference on Drug Discovery 2020 (ICDD 2020)**. BITS-Hyderabad, 29th Feb. - 2nd Mar.
11. Attended 3 days training on **Drug Discovery, designing and Development** from 5th-7th March 2019 at Birla Institute of Technology, Mesra, Ranchi
12. Attended **International symposium & 9th Bioinformatics, Drug Discovery and Development (IS:IDDD 2019)**, BIF, Jamia Hamdard 31st Jan 2019.
13. Attended One Day International Symposium on **Streamlining Drug Design** 30th Jan. 2019.
14. Participated in AICTE sponsored QIP on "**Cutting Edge And Emerging Technologies In Pharmaceutical Education & Research**" organized by Birla Institute of Technology, Mesra, Ranchi, between 11th-24th Jan 2019
15. Participated in **Dr. John Kapoor's Prof. M. L. Khurana memorial Lecture-2018** at Birla Institute of Technology, Mesra, Ranchi.
16. Participated in one day workshop on "**Lab safety: Pitfall and Remedies**" conducted by Birla Institute of Technology, Mesra, Ranchi on 17th Dec 2108
17. Participated in PCI sponsored continuing education program on "**Recent Trends in Pharmaceutical education and Research**" between 12th-14th Sep 2018 at Birla Institute of Technology, Mesra, Ranchi
18. Participated in AICTE sponsored QIP on "**Rational approach to drug development**" organized by Birla Institute of Technology, Mesra, Ranchi, between 2nd-15th June 2017
19. Participated and volunteered in AICTE sponsored QIP organized by Birla Institute of Technology, Mesra, Ranchi between 19th May -1st June 2017
20. Successfully completed one day training program on MBTI organized by Feeling minds at KIET campus, Ghaziabad, UP, India on 7th Dec 2016.
21. Participated as delegate in an International conference with Theme "**Building-up SciTech pharmacist of today**" held between 11th& 12th march 2016 at Amity Institute of Pharmacy, Amity University, Noida.

22. Attended a National seminar on “**Recent advances in central nervous system drug discovery**” between 30th to 31st, October 2015, organized jointly by Ram-eesh Institute Of Vocational, Ghaziabad & Technical Education and Department of Science and Technology. Govt of India, New Delhi.
23. Attended a National seminar on “**Emerging Frontiers and Challenges in Pharmaceutical Sciences**” on 4th April, 2015, conducted by BSA Institute of Pharmacy, Faridabad.
24. Organized Literary fest held between 12th Aug- 14 Sep 2013 at KIET group of institution, Ghaziabad, UP.
25. Worked as **Joint Secretary** in the **summer school programme** organized in KIET School of pharmacy, Ghaziabad from 17th to 21st June 2013.
26. Participated in **National Seminar on Pharma Vision 2020: Academia Industry Interaction** held at HR Group of Institutions, Ghaziabad on 18th April, 2013
27. Participated in the **2nd Annual conference of Society of Pharmaceutical education and research (SPER)**, Jamia Hamdard, New Delhi on 9th march 2013.
28. Worked as Faculty Coordinator in the event **FRESCOS-12** held on 1st Sep 2012 at KIET group of institution, Ghaziabad, UP.
29. Worked as Faculty Coordinator in the event **Epoque 2012** held during 1st -2nd March 2012 at KIET group of institution, Ghaziabad, UP.
30. Participated in **India Pharma Convention at DIPSAR**, New Delhi, on 12th Feb, 2012.
31. Worked as faculty Coordinator in the event **FRESCOS-11** held on 3rd Sep 2012 at KIET group of institution, Ghaziabad, UP.
32. Actively participated in organizing **convocation** on 28th April 2011 at KIET group of institution, Ghaziabad, UP.
33. Participated in **International conference on Recent Advances in Pharmaceutical Science**, at IT-BHU, Varanasi on 22nd -23rd December 2010.
34. Participated in **National Seminar on Current Status Of Pharma Education In India** on 14th November 2010
35. Participated in National Seminar on “**Emerging trends in Pharmaceutical Sciences**” Organized by Jamia Hamdard, Sponsored by AICTE, New Delhi, 2010.
36. Participated in 60th, **Indian Pharmaceutical Congress IPC 2008, New Delhi** (10th-12th Dec.2008)
37. Worked as a volunteer in 60th, **Indian Pharmaceutical Congress IPC 2008, New Delhi** (10th-12th Dec.2008)

PROFESSIONAL STRENGTHS:

- Self-motivated person
- Excellent communicational skills, reasoning, exemplifying and strong writing skills
- Strongly believes in deep understanding of the subject
- Meticulous working style and adaptability
- Believes in team work and grooming and seek for being groomed
- Efficient at giving presentations
- Personality: Optimistic, Goal-oriented, Creative, Leadership ability, Accommodating, Innovative.

PERSONAL PROFILE:

Sex	Male
Date of Birth	18 th March 1979
Father's Name	Late Mr. Sheikh Mustaquim
Mother's Name	Mrs. Hazarat Khotaija
Nationality	Indian
Marital Status	Married
Languages Known	English, Urdu, Hindi, Telugu
Present Address	House No. KD 370, Room No.6 Behind BIT More, Near Shiv Mandir, Ranchi, Jharkhand-835217

REFERENCES:

1. Dr. Barij Nayan Sinha (Ph.D Supervisor)

Dean Academics
Amity University
AA II, Newtown, Kadampukur
Kolkata, West Bengal 700135, India
Tel:+91-9431382671
Email: binsinha@kol.amity.edu

2. Dr. Venkatesan Jayaprakash (Ph.D Co-Supervisor)

Professor
Department of Pharmaceutical Sciences and Technology
Birla Institute of Technology Mesra, Ranchi
Jharkhand-835215, India
Tel:+91-9470137264;
Email: venkatesanj@bitmesra.ac.in

3. Dr. Mohammad Shaquiquzzaman

Associate Professor
Dept. of Pharmaceutical Chemistry
Faculty of Pharmacy
Jamia Hamdard
New Delhi-110062, India
Tel:+91- 9990663405
E-mail: mszaman@jamiahamdard.ac.in

Declaration: I hereby declare that all the above information is true to the best of my knowledge.

Date: 14/01/2025

Place: Ranchi, Jharkhand,India



(Sheikh Murtuja Ph.D)