

Dr. Keerti Jain, Ph.D.

Associate Professor

Department of Pharmaceutics

National Institute of Pharmaceutical Education and Research (NIPER) - Raebareli
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<https://scholar.google.co.in/citations?user=E-9sCmYAAAAJ&hl=en>

<https://niperraebareli.edu.in/faculty.html>

<https://niperraebareli.irins.org/profile/150685>

https://niperraebareli.edu.in/faculty/CV_Dr.Keerti.pdf

RESEARCH INTEREST AND AREA OF EXPERTISE: Pharmaceutical Formulation development, Biomaterials, Drug Delivery, Dendrimers, Quantum Dots, Nanoparticles, Nanoemulsion, Nanobiotechnology, Nanotheranostics, Ligand-driven targeting, Glycosylation, Biocompatibility enhancement, Carbon nanotubes, Nanoemulgel, Interaction and Toxicity studies, Topical delivery systems

Academic and Professional Qualifications

- **Ph.D. in Pharmaceutical Sciences:** Dr. H.S. Gour Central University, Sagar, M.P.
(Thesis Submission: June 2014; Ph.D. Defence and award: March 2015)
- **M. Pharm. in Pharmaceutics:** Dr. H.S. Gour Central University, Sagar, M.P.
[I Division; Merit Position: First]

- **B. Pharm.** Dr. H.S. Gour Central University, Sagar, M.P. [I Division; Merit Position: Third]
- Completed a certificate course of six months in Computer Fundamentals and Basic Software.
- **GATE 2007:** 99.05 percentile AIR: 173 (Indian Institute of Technology, Kanpur)
- **GATE 2006:** 88.13 percentile AIR: 1694 (Indian Institute of Technology, Kharagpur)

Professional Experiences

- ***Associate Professor:*** June 2025-Present; NIPER Raebareli, Lucknow, U.P.
- ***Assistant Professor:*** June 2020 – June 2025; NIPER Raebareli, Lucknow, U.P.
- ***Assistant Professor:*** August 2017 – June 2020; Delhi Pharmaceutical Sciences and Research University, New Delhi, India
- ***Post-Doctoral Fellow (SERB, NPDF):*** April 2017 – August 2017; Faculty of Pharmacy, The M. S. University of Baroda, Vadodara, Gujarat
- ***Lecturer:*** August 2015 – April 2017; National Institute of Pharmaceutical Education and Research (NIPER), Raebareli, U.P.
- ***Associate Professor:*** July 2014 – August 2015; ISF College of Pharmacy, Moga, Punjab
- ***Assistant Professor:*** March 2010 – June 2011; Vedic Institute of Pharmaceutical Education and Research, Sagar, M.P.

Development of e-learning delivery process/material

Name of the e-learning process	Subject	Organization for which it was developed	No. of modules	Level for which it is developed UG/PG/Research etc.
e-pathshala for M.Sc. Biotechnology students approved by U.G.C	Nano-biotechnology	UGC, New Delhi	7	PG

RESEARCH GUIDANCE

Ph.D.: 02 (Awarded); 06 (Ongoing)

S.No.	Student Name	Current Status
1.	Vishwas P Pardhi	Awarded
2.	Teeja Suthar	
3.	Parth Patel	Synopsis submitted (Thesis to be submitted)
4.	Anchal Pathak	
5.	KM Gijith Mohan	Ongoing
6.	Manisha Patel	
7.	Sofiya Tarannum	
8.	Shubham Gaidhani	

Pharm. D.: 01 (Awarded)

- **M. Pharm./M.S. Pharm. Dissertations:** 38 (Awarded), 6 (Ongoing) [Pharmaceutics: 4 & Regulatory Affairs: 02]
- **Guided one Next Gen Scientists Foundation (NGSF) fellow**, Mr. Shivam Bhadoria, for a research project titled “Development, Optimization and Evaluation of Bioflavonoid-Loaded Nanovesicles for the Management of Migraine” (Duration: 2 Months, i.e., from 03.7.2023 to 31.08.2023) under the Internship program of NGSG during Summer, 2023.

AWARDS AND RECOGNITION

- Awarded with Gyanoday Puruskar on 26 January 2025 by NIPER – Raebareli for Excellent Work done in year 2024.
- Won First Prize in Oral presentation in International Conference 2025 “Modern Medicine and Rational Use of Medicine – A challenge” organized at Department of Pharmaceutical Technology, Jadavpur University, Kolkata, India on January 17, 2025, and won First Prize in Oral presentation.
- **Awarded with prestigious “ICMR – Shakuntala Amir Chand Award” for the year 2019. [Vide Notification No. 3/1/3/ICMR awards (3)/2019-HRD; Dated 29.12.2020]**
- Enlisted among World’s Top 2% Scientists, consecutively for four years 2020, 2021, 2022 and 2023 in the field of Pharmacology and Pharmacy, a list created by Stanford University, USA.

- Awarded with SPER-WF Young Scientist Award during the 11th Annual International Conference & Exhibition [SPER-2022] held at Vivekanand Global University, Jaipur on November 18-19, 2022.
- Edited a thematic issue entitled “Theranostic applications of nanomaterials” (Vol. 28; Issue – 2) as Guest Editor for “Current Pharmaceutical Design” journal (Impact Factor: 3.116) published by Bentham Science Publisher in January 2022.
- Edited a thematic issue entitled “Theranostic applications of nanomaterials” (Vol. 28; Issue – 2) as Guest Editor for “Current Pharmaceutical Design” journal (Impact Factor: 3.116) published by Bentham Science Publisher in January 2022.
- Won second prize in Hindi Lekhan Pratiyogita organized in Rajbhasha Hindi Pakhwada – 2020 held in NIPER Raebareli during September 14-28, 2020.
- Won Best Oral Presentation Award in International Conference [SPER-BANGKOK 2019] held at Narai Hotel, Bangkok, Thailand.
- Won MOST INNOVATIVE IDEA AWARD of the Impact Week Delhi 2019 organized by Lufthansa Group (Germany).
- Best Oral Presentation Award in APTICON – 2018.
- Ph.D. research work was selected for presentation in BioAsia Innovation Award – 2015.
- First prize for Poster Presentation in international conference NIPiCON – 2014.
- M. Pharm. research work was selected for presentation in Ranbaxy Young Scholar Award – 2013.
- Best Oral Presentation Award in National Seminar 2013.
- Best International Oral Presentation Award in ISC 2012.
- Best Poster Presentation Award in International Science Congress 2011.
- Pharmaceutical Science Alumni Award 2006.
- Indira Gandhi Pratibha Award 1999.

NATIONAL FELLOWSHIPS/SCHOLARSHIPS

- SERB-National Post-Doctoral Fellowship (SERB-NPDF) for Post-Doctoral Research Work was awarded in January 2017 for two years.
- International travel grant from DST, New Delhi, to attend “24th International Conference on Bioencapsulation – 2016” held at Lisbon, Portugal, on 21st – 23rd September 2016.
- Fellowship for Training of Young Scientists (2016, 2014 and 2013) awarded by M.P. Council of Science and Technology (MPCST) based on paper presented at M.P. Young Scientist Congress, 2016, 2014 and 2013.
- International travel grant from ICMR, New Delhi and INSA, Chennai, to attend the international conference “ICYRAM-2012” held in Singapore on 1st– 7th July 2012.
- Senior Research Fellowship (CSIR-SRF) awarded from 1st April 2012 for carrying out research work at the Department of Pharmaceutical Sciences, Dr. H.S. Gour Central University, Sagar.
- Junior Research Fellowship (UGC-JRF) for Post-Graduation at Dr. H.S. Gour University, Sagar, for the period 2007-2009.

INTERNATIONAL VISITS

- **Bangkok, Thailand:** Presented research paper (Oral Presentation) entitled “Anti-angiogenic dendrimers for treatment of cancer” in **the International Conference [SPER-BANGKOK 2019] at Narai Hotel, Bangkok, Thailand, from 03 to 04 October 2019 and won the Best Oral Presentation Award.**
- **Lisbon, Portugal:** Presented research paper (Oral Presentation) entitled “Core shell nanoparticles for oral delivery of low molecular weight heparin” in the **24th International Conference on Bioencapsulation – 2016** at Lusofona Universidae, **Lisbon, Portugal** from 21 to 23 September 2016. (Travel grant was awarded by the ITS-SERB, DST, New Delhi)
- **Singapore:** Presented a research paper in the **International Conference of Young Researchers on Advanced Materials (ICYRAM 2012)** on the topic “Dual strategy for treatment of cancer based on development of anti-angiogenic carrier for anticancer agent” held at **Matrix, Biopolis, Singapore** from 1 to 6 July 2012. (Travel grant was awarded by ICMR, New Delhi and CICS-INSA, Chennai)

ONGOING/COMPLETED EXTRAMURAL RESEARCH PROJECTS

ONGOING

Research Project 1: Ferulic acid-loaded anti-frigid nanoemulgel for the treatment of Frostbite

Role: Principal Investigator

Duration: 1 Year (2025-26)

Funding Agency: Alliance for Medicinal Research, Innovation and Translation (AMRIT) Grant Challenge program (Launched under 'Joint Innovation and Incubation Program in the pharmaceutical sector' between FIRST, IIT Kanpur and NIPER Raebareli, supported by Boehringer Ingelheim India Private Limited) under 'Faculty' Category

Funding Amount: INR 6.0 Lakhs

Research Project 2: Development and characterization of a bioflavonoid-based formulation

Role: Principal Investigator

Duration: 1 Year [2025-2026]

Funding Agency: Institute of Nuclear Medicine & Allied Sciences (INMAS) – DRDO, New Delhi

Funding Amount: INR 7.2 Lakhs

Research Project 3: Pharmaceutical Development and Standardization of a Lodhradi Yonivarti, Ayush LPM Vaginal Tablet, and Ayush LPM Vaginal Gel, along with the evaluation of Vaginal Irritation Study, Shelf-life and Antimicrobial Study (Collaborative)

Role: Principal Investigator

Duration: 2.5 Years [2025-2027]

Funding Agency: Central Council for Research in Ayurvedic Sciences (Ministry of Ayush, Govt. of India), Janakpuri, New Delhi

Funding Amount: INR 34.84400 Lakhs [Rs. 10,79,800/- (CARI Jhansi) + Rs. 24,04,600/- (NIPER Raebareli) = Rs 34,84,400/-]

COMPLETED

Research Project 1: Comprehensive Biological Evaluation of Different Drug-loaded Surface Engineered Dendrimer Conjugates for Treatment of Cancer

Role: Principal Investigator [PI: Dr. Keerti Jain; Co-PI: Dr. Mukesh Nandave]

Duration: 3 Years [2021-2024]

Funding Agency: ICMR, New Delhi

Funding Amount: INR 30.5 Lakhs

Research Project 2: Development of Dendrimers based Novel Hybrid Nanocarriers for Controlled Delivery of Anticancer Bioactives

Role: Principal Investigator [As SERB-NPDF]; Mentor: Prof. A. N. Misra

Duration: 2 Years [2017-2019]

Funding Agency: SERB, New Delhi

Funding Amount: INR 19.6 Lakhs

Research Project 3: Intracellular Targeting of Antiparasitic Drugs to Macrophages through Ligand Conjugated Dendrimers via Receptor Up-Regulation **(09/150/(0112)/2012/EMR-I)**

Role: Principal Investigator [As CSIR-SRF]; Mentor: Prof. N. K. Jain

Duration: 3 Years [2012-2014]

Funding Agency: CSIR, New Delhi

Funding Amount: INR 7.32 Lakhs

INTRAMURAL RESEARCH PROJECT

Title: Antifrigid nanoemulgel formulation for frostbite treatment with enhanced permeability and angiogenic effect

Role: **Principal Investigator: Dr. Keerti Jain**

Duration: 2 Years [2024-2026]

Funding Agency: NIPER – Raebareli [under the scheme NIPER-Raebareli Innovation Grant (NIG: 2023-24)]

Funding Amount: INR 5.0 Lakhs

MEMBERSHIP OF PROFESSIONAL BODIES

- MEMBERSHIP OF “INDIAN PHARMACEUTICAL ASSOCIATION (IPA)”
MEMBERSHIP ID: UP/LUCK/ON/LM/000258
- MEMBERSHIP OF “CONTROLLED RELEASE SOCIETY – INDIAN CHAPTER”
MEMBERSHIP ID: CRSIC - 1045
- LIFE MEMBER OF “SOCIETY OF PHARMACEUTICAL EDUCATION AND RESEARCH (SPER)” **MEMBERSHIP NO. SPER/LM/DL/031**
- LIFE MEMBER OF “THE ASSOCIATION OF PHARMACEUTICAL TEACHERS OF INDIA (APTI)” **MEMBERSHIP NO. MP/LM-423**
- STATE PHARMACY COUCL REGISTRATION DETAILS:
REGISTRATION NO. (M.P. State Pharmacy Council): 21864

PATENTS

- ***Dr. Keerti Jain, Nandha Joyson, Anchal Pathak. Amphotericin B-loaded Zein-based Formulation and Its Process of Preparation. Patent Application No. 202311071032 Filed on 18.10.2023.***
- ***Dr. Keerti Jain, Parth R. Patel, Teeja Suthar, Ashima Thakur, Dr. Abha Sharma. Novel dendrimer conjugates for targeted delivery of drug(s) to treat life-threatening diseases. Patent Application No. 202211039492 Filed on 09.07.2022.***
- ***Dr. Keerti Jain, Ms. Surabhi Gupta, Ms. Teeja Suthar, Rohan Chand Sahu, Dr. U.S.N. Murty. Cost-effective antimicrobial nano-film coating/spraying solution for high traffic touch points and methods of preparation thereof. Patent Application No. 202111050865 Filed on 06.11.2021.***
- ***Dr. Keerti Jain, Vishwas P. Pardhi, Dr. S.J.S. Flora. Antitubercular Cyclodextrin Complexes of Bedaquiline Fumarate and Method of Preparation Thereof. Patent Application no. 202111023193 Filed on 25.05.2021.***
- ***Dr. Keerti Jain, Teeja Suthar, Anand Singh Patel, Dr. S.J.S. Flora. Composition of Micro-/nano-sized emulsions containing flavonoids, and methods of preparation and uses thereof. Patent Application No. 202111007897 Filed on 24.02.2021.***

- *Vishwas P. Pardhi, Dr. Keerti Jain, Dr. S.J.S. Flora. Antitubercular Pharmaceutical Solid Dispersion of Bedaquiline Fumarate and Method of Preparation Thereof. Patent Application No. 202011040038 Filed on 16.09.2020.*

INTERNATIONAL BOOKS

- **Jain K, Jain NK (Eds)** “Multifunctional and Targeted Theranostic Nanomedicines - Formulation, Design and Applications” Springer Nature, ISBN: 9789819905379; 2023; Pages: 1-417 [Published in August 2023].
- **Jain K, Ahmad J (Eds)** “Nanotheranostics for Treatment and Diagnosis of Infectious Diseases” Academic Press, Elsevier, ISBN: 9780323912013; 2022; Pages: 1-391. [Published in May 2022]
- **Mehra NK, Jain K (Eds)** Dendrimers Nanomedicine: Concept, Theory and Regulatory Perspectives. CRC Press, UK. ISBN 9780367466053; 2021; Pages: 1-328. [Published in March 2021]
- **Yadav AK, Jain K (Eds)** "Novel Carrier Systems for Targeted and Controlled Drug Delivery" Springer Nature, ISBN: ebook - 978-981-97-4970-6 and Hardcover - 9789819749690; 2024; Pages: 1-531 [Published in December 2024]. DOI: <https://doi.org/10.1007/978-981-97-4970-6>
- **Jain K, Yadav AK (Eds)** "Advances in Pharmaceutical Product Development" Springer Nature, ISBN: 9789819792290 (print); 978-981-97-9230-6 (online) 2025; Pages: 1-443 [Published in March 2025]. DOI: <https://doi.org/10.1007/978-981-97-9230-6>

PUBLICATIONS (INTERNATIONAL):

1. Sutha T, Jain K*. Development and Evaluation of N-acetyl cysteine-grafted Polyamidoamine Dendrimers for Enhanced Brain Delivery of Donepezil hydrochloride. **RSC Pharmaceuticals**. 2025; Accepted; Manuscript Ref. No. PM-ART-04-2025-000119.R1.
2. Krishnapal, Patel P, Pardhi V, **Jain K***. Bedaquiline loaded Soluplus Micelles for Improving Solubility and Intestinal Permeability: Formulation, Optimization, and *Ex vivo* Evaluation. **Journal of Drug Delivery Science and Technology**. 2025;105(106656):1-11. DOI: <https://doi.org/10.1016/j.jddst.2025.106656> (Impact Factor: 4.9)
3. Pathak A, Nandave M, **Jain K***. Mannosylated PAMAM G3.0 and PAMAM G4.0 dendrimers: Characterization and biophysical evaluation of their interactions with bovine serum albumin and β -lactoglobulin. **Journal of Molecular Liquids**. 2025;420(126803):1-16. DOI: <https://doi.org/10.1016/j.molliq.2024.126803> (Impact Factor: 5.2) Online ISSN: 1873-3166
4. Sivasankar K, Pathak A, **Jain K***. Effect of Tween 80 and Pluronic 127 on the stabilization of zein nanocarriers for the delivery of piperine. **Food Research International**. 2024;197(115202):1-13. DOI: <https://doi.org/10.1016/j.foodres.2024.115202> (Impact Factor: 8.0) Online ISSN: 1873-7145
5. Patel M, Jain VK, Popli H, **Jain K***. Nanoformulations of amphotericin B to resolve challenges in antifungal therapy. **Nanomedicine**. 2024;19(30):2505-08. DOI: <https://doi.org/10.1080/17435889.2024.2407281> (Impact Factor: 3.9) Online ISSN: 1748-6963
6. Kanoujia J[#], Tarannum S[#], Kaurav M, Raina N, **Jain K***, Gupta M*. Insight into Recent Updates on Vaccines Development and Immunology of Monkeypox Infection. **Current Treatment Options in Infectious Diseases**. 2024;16:118-128. DOI: <https://doi.org/10.1007/s40506-024-00276-z> (Impact Factor: 3.8) ISSN: 1534-6250
7. Pathak A, Jain NK, **Jain K***. Dendrimer-mediated Targeting of Angiogenic Biomarkers: Therapeutic Intervention Against Cancer. **Expert Opinion on Drug Delivery**. 2024;21(8):1235-1250 DOI: <https://doi.org/10.1080/17425247.2024.2394631>. (Impact Factor: 5.4) ISSN: 1744-7593
8. Sonwani A, Pathak A, **Jain K***. Nanocarriers-mediated nose-to-brain drug delivery: A novel approach for the management of Alzheimer's Disease. **Journal of Drug Delivery Science and**

- Technology.** 2024;98(105855):1-16. DOI: <https://doi.org/10.1016/j.jddst.2024.105855> (Impact Factor: 4.9) ISSN: 2588-8943
9. Pardhi VP, Patel M, **Jain K***. Formulation Development, Characterization, and Evaluation of Bedaquiline Fumarate -Soluplus® -Solid Dispersion. **Pharmaceutical Development and Technology.** 2024;29:492-503. DOI: <https://doi.org/10.1080/10837450.2024.2348585> (Impact Factor: 2.5) ISSN: 1097-9867
 10. Sonam S, Patel P, **Jain K***. PAMAM Dendrimer and Carbon Quantum Dots Complexes as Theranostic Nanocarrier: Synthesis, Optimization and Photophysical Characterization. **Optics and Laser Technology.** 2024;175(110761):1-12; DOI: <https://doi.org/10.1016/j.optlastec.2024.110761> (Impact Factor: 5.0)
 11. Pardhi VP, Pathak A, **Jain K***. Solid Dispersions of Bedaquiline Fumarate to Improve its Pharmaceutical Attributes: A Comparative Study between PEG and PVP. **Journal of Drug Delivery Science and Technology.** 2024;94(105461):1-15; DOI: <https://doi.org/10.1016/j.jddst.2024.105461> (Impact Factor: 4.9) ISSN: 2588-8943
 12. Patel P, Pathak A, **Jain K***. Novel Ligand Decorated Theranostic Zein Nanoparticles Co-loaded with Paclitaxel and CQDs: Formulation and Optimization. **Nanomedicine.** 2024;19(5):367-382; DOI: <https://doi.org/10.2217/nnm-2023-0197> (Impact Factor: 3.9)
 13. Jain VK, **Jain K***, Popli H. Conjugates of Amphotericin B to Resolve Challenges Associated with its Delivery. **Expert Opinion on Drug Delivery.** 2024;21(2):187-210. DOI: <https://doi.org/10.1080/17425247.2024.2308073>. (Impact Factor: 5.4) Print ISSN: 1742-5247 Online ISSN: 1744-7593
 14. Sahu RC, Suthar T, Kumar D, Singh P, Datusalia AK, **Jain K***. Novel ligand conjugated poly(propylene imine) dendrimers for brain targeted delivery of tacrine hydrochloride. **Journal of Drug Delivery Science and Technology.** 2024;92(105336):1-10. (Impact Factor: 4.9)
 15. Pardhi VP, Patel P, Vaish A, **Jain K***. Inclusion complexes of bedaquiline fumarate with β -cyclodextrin and its derivatives: *In silico*, *in vitro* and *in vivo* evaluation. **Journal of Drug Delivery Science and Technology.** 2024;91(105253):1-13. (Impact Factor: 4.9)
 16. Pathak A, Pal AK, Roy S, Nandave M, **Jain K***. Role of Angiogenesis and its Biomarkers in Development of Targeted Tumor Therapies. **Stem Cells International.** 2023; Accepted for publication on 04.12.2023; Manuscript ID: 9077926 (Impact Factor: 3.3)

17. Joyson N, Pathak A, **Jain K***. One Platform Comparison of Polymeric and Lipidic Nanoparticles for the Delivery of Amphotericin B. **AAPS PharmSciTech**. 2023;10;24(8):226(1-16) (**Impact Factor: 4.0**)
18. Patel P, Kumar K, Jain VK, Popli H, Yadav AK, **Jain K***. Nanotheranostic for Diagnosis and Treatment of Breast Cancer. **Current Pharmaceutical Design**. 2023;29(10):732-747. DOI: <https://doi.org/10.2174/1381612829666230329122911> (**Impact Factor: 2.8**)
19. Suthar T, Patel P, Singh P, Datusalia AK, Yadav AK, **Jain K***. Hesperidin Microemulsion: Formulation Optimization, Characterization, and in vitro Evaluation. **Journal of Drug Delivery Science and Technology**. 2023;80(104166) 1-10. DOI: <https://doi.org/10.1016/j.jddst.2023.104166> (**Impact Factor: 4.9**).
20. Pardhi VP, Suthar T, Sharma A, **Jain K***. Bedaquiline fumarate microemulsion: Formulation optimization, rheological characterization, and *in vitro* studies. **Nanomedicine (Lond)**. 2022;17(21):1529-1546. DOI: <https://doi.org/10.2217/nnm-2022-0132> (**Impact Factor: 3.9**)
21. Patel P, Handa M, **Jain K***, Shukla R. Recent pharmaceutical engineered approaches as prophylaxis and management of frostbite. **Journal of Drug Delivery Science and Technology**. 2022;76(103838):1-9. DOI: <https://doi.org/10.1016/j.jddst.2022.103838> (**Impact Factor: 4.9**)
22. Flora SJ, **Jain K**, Panghal A, Patwa J. Chemistry, Pharmacology and Toxicology of Monoisoamyl Dimercaptosuccinic Acid, A Chelating Agent for Chronic Metal Poisoning. **Chemical Research in Toxicology**. 2022; 1-19. DOI: <https://doi.org/10.1021/acs.chemrestox.2c00129>. (**Impact Factor: 3.8**)
23. Sahu RC, Suthar T, Pathak A, **Jain K***. Interventions for the Prevention and Treatment of Japanese Encephalitis: A Systematic Review. **Current Infectious Disease Reports**. 2022;24:189-204. DOI: <https://doi.org/10.1007/s11908-022-00786-1>. (**Impact Factor: 2.9**)
24. Juneja M, Suthar T, Pardhi VP, Ahmad J, **Jain K***. Emerging trends and promises of nanoemulsions in therapeutics of infectious diseases. **Nanomedicine (Lond)**. 2022;17(11):793-812. DOI: <https://doi.org/10.2217/nnm-2022-0006> (**Impact Factor: 3.9**)

25. Saini V, Singh A, Shukla R, **Jain K**, Yadav A. Silymarin Encapsulated Xanthan Gum Stabilized Selenium Nanocarriers for Enhanced Activity against Amyloid Fibrils Cytotoxicity. **AAPS PharmSciTech**. 2022;23(125):1-14 (**Impact Factor: 4.0**)
26. Ahmad J, Rizwanullah Md., Suthar T, Albarqi HA, Ahmad MZ, Vuddanda PR, Khan MA, **Jain K***. Receptor-Targeted Surface Engineered Nanomaterials for Breast Cancer Imaging and Theranostic Applications. **Critical Reviews™ in Therapeutic Drug Carrier Systems**. 2022;39(6):1-44. DOI: <https://doi.org/10.1615/CritRevTherDrugCarrierSyst.2022040686> (**Impact Factor: 2.5**)
27. **Jain K***, Zhong J. Theranostic Applications of Nanomaterials - Editorial. **Current Pharmaceutical Design**. 2022;28(2):77. DOI: 10.2174/138161282802211223150153 (**Impact Factor: 2.8**)
28. Ojha B[#], Jain VK[#], Gupta S, Talegaonkar S, **Jain K***. Nanoemulgel: A Promising Novel Formulation for Treatment of Skin Ailments. **Polymer Bulletin**. 2022;79:4441-4465. DOI: <https://doi.org/10.1007/s00289-021-03729-3> (**Impact Factor: 4.0**)
29. Rizwanullah Md., Ahmad MZ, Ghoneim, Alshehri S, Imam SS, Shadab Md, Alhakamy NA, **Jain K**, Ahmad J. Receptor-Mediated Targeted Delivery of Surface-Modified Nanomedicine in Breast Cancer: Recent Update and Challenges. **Pharmaceutics**. 2021;13(2039):1-36. DOI: <https://doi.org/10.3390/pharmaceutics13122039> (**Impact Factor: 5.5**)
30. **Jain K***, Patel AS, Pardhi VP, Flora SJS*. Nanotechnology in Wastewater Treatment. **Molecules**, 2021;26(1797):1-26. DOI: <https://doi.org/10.3390/molecules26061797> (**Impact Factor: 4.6**)
31. Gauro R, Nandave M, Jain VK, **Jain K***. Advances in dendrimers mediated targeted drug delivery to brain. **Journal of Nanoparticle Research**. 2021;23(76):1-20. DOI: <https://doi.org/10.1007/s11051-021-05175-8> (**Impact Factor: 2.6**)
32. **Jain K**, Shukla R, Yadav A, Ujjwal RR, Flora SJS. 3D Printing in development of nanomedicines. **Nanomaterials**, 2021;11(420):1-24. DOI: <https://doi.org/10.3390/nano11020420>. (**Impact Factor: 4.3**)
33. Pardhi VP, **Jain K***. Impact of Binary/Ternary Solid Dispersion Utilizing Poloxamer 188 and TPGS to Improve Pharmaceutical Attributes of Bedaquiline Fumarate. **Journal of Drug**

Delivery Science and Technology, 2021;62(102349):1-13. DOI: <https://doi.org/10.1016/j.jddst.2021.102349>. (**Impact Factor: 4.9**)

34. Khan MA, Jain VK, Md. Rizwanullah, Ahmad J, **Jain K***. PI3K/Akt/mTOR pathway inhibitors in triple-negative breast cancer: A review on drug discovery and future challenges. **Drug Discovery Today**, 2019;24(11):2181-2191. DOI: <https://doi.org/10.1016/j.drudis.2019.09.001>. (**Impact Factor: 7.5**)
35. Joshi K, Chandra A, **Jain K**, Talegaonkar S. Nanocrystalization: An emerging technology to enhance the bioavailability of poorly soluble. **Pharmaceutical Nanotechnology**, 2019;7(4):259-278. DOI: <https://doi.org/10.2174/2211738507666190405182524>. (Impact Factor not received yet)
36. Afsana, Jain VK, Haider N, **Jain K***. 3D Printing in Personalized Drug Delivery. **Current Pharmaceutical Design**, 2018;24(42):5062-5071. DOI: <https://doi.org/10.2174/1381612825666190215122208>. (**Impact factor: 2.8**)
37. **Jain K***. Nanohybrids of Dendrimers and Carbon Nanotubes: A benefaction or forfeit in drug delivery? **Nanoscience and Nanotechnology-Asia**, 2019;9(1),21-29. DOI: <https://doi.org/10.2174/2210681208666171204163622>. (**Impact Factor: 1.35**)
38. Ahmad J, Gautam A, Komath S, Bano M, Garg A, **Jain K**. Topical nano-emulgel for skin disorders: Formulation approach and characterization. **Recent Patents on Anti-Infective Drug Discovery**, 2019;14(1):36-48. DOI: <https://doi.org/10.2174/1574891X14666181129115213>. (Impact Factor not received yet)
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❖ INVITED CHAPTERS IN INTERNATIONAL BOOKS

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Design, Characterization and Application” **Elsevier**, 2022; ISBN: 9780323912013; DOI: <https://doi.org/10.1016/B978-0-323-91201-3.00013-X>.

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INVITED SPEAKER/CHAIRPERSON/ RESEARCH PRESENTATIONS

1. Delivered an invited lecture as resource person on the title “Novel Dosage Forms for Herbal Formulations: From Conventional Systems to Nano-based Innovations” on 26th August 2025 in a 6-day CME for Ayush Teachers/Scientists/Medical Officers from 25th August to 30th August 2025, organized by CCRAS-Central Ayurveda Research Institute (CARI), Jhansi.
2. Delivered an invited lecture titled “Development of Targeted Drug Delivery and Precision Nanomedicine: Advances with AI and ML” as speaker on 7th March 2025 at Pharmanecia 4.E International Research Conference organized on 7th & 8th March 2025 at JSS College of Pharmacy, Ooty.
3. Delivered an invited lecture on “IP, IPR and Mechanisms for IP Protection” on February 06, 2025, IPR (Intellectual Property Rights) Awareness Programme, funded by the Uttar Pradesh Council of Science and Technology (UPCST) organized by Babasaheb Bhimrao Ambedkar University, Lucknow.
4. Delivered an invited lecture on “Molecular Modelling and Simulation in Drug-Excipients Interaction” on January 07, 2025, in Faculty Development Program on “Advances in QbD, Computational Tools, Machine Learning & Artificial Intelligence in Pharmaceutical Formulation Development: Current Trends & Future Prospects” organized by School of Pharmacy, The Assam Kaziranga University from January 6 to January 10, 2025.
5. Delivered an invited lecture “Pharmaceutical Formulation Development: Role of Nanoparticles” on September 14, 2024, in Faculty Development Program organized by MIT-World Peace University, Pune.
6. Delivered an invited lecture “Polymeric and lipidic nanocarriers in controlled and targeted drug delivery” on August 2, 2024, in Certificate course and Hands on training on “Design and characterization of nanomaterials” organized by NIPER – Raebareli from July 29, 2024 – August 02, 2024.

7. Delivered an Expert lecture as Guest of Honor on “Novel Avenues and Opportunities in Pharmaceutical Formulation Development” on 21st May 2024 at Vedic Institute of Pharmaceutical Education and Research, Sagar.
8. Delivered an Invited lecture on “Nanomedicine and Formulation Development in Ayurveda” as Resource person in Two days National Seminar on “Exploring new Avenues for Novel Drug Dosage Development and Pharmaceutical R & D in Ayurveda” on 3rd-4th February 2024 at Central Ayurveda Research Institute, Gwalior Road, Jhansi, India
9. Delivered an invited talk on “Nanomedicine – Role of QbD in Design and Development” in the webinar organized by the Department of Pharmaceutics, Annamacharya College of Pharmacy on September 21, 2023.
10. Delivered an invited talk titled “Design and Evaluation of Smartly Engineered Precision Nanomedicines” on 20.07.2023 in five days national workshop on Design and Characterization of Nanomaterials organized by the Department of Pharmaceutics, NIPER – Raebareli from July 17 – July 21, 2023.
11. Delivered an invited talk on “Nanomedicines: Design, Evaluation and Applications” in the ISF College of Pharmacy Dialogue Series on June 07, 2023.
12. Delivered an invited presentation on technology based on “Design of Delivery Systems to enhance Bioavailability of BCS Class II Drugs” developed in my lab at TIFAC-DSIR-CDRI Joint Workshop on Techno-commercial Assessment of TRL 6 and above Technologies in domains of Chemical, Pharmaceutical, Healthcare and Medical Sciences organized on 23.1.2023 at CDRI, Lucknow.
13. Delivered scientific presentation titled “Formulation and Characterization of Microemulsion and Solid Dispersion to Improve Pharmaceutical Attributes of an Antitubercular Drug - Bedaquiline” in the SPER 11th Annual International Conference & Exhibition [SPER 2022] organized by SPER, India in collaboration with: Vivekananda Global University, Jaipur, India on November 18-19, 2022.
14. Delivered scientific presentation titled “Development and evaluation of nano formulations and supersaturated drug delivery systems to improve biopharmaceutical attributes of bedaquiline fumarate” in International Symposium on Recent Trends and Future Opportunities in

Pharmaceuticals, NIPER-Pharmacon-2022 held on November 10-12, 2022, and organized by NIPER-S.A.S. Nagar, Punjab.

15. Delivered an invited lecture “Targeted Nanomedicines and QbD” on June 27, 2022, in Certificate course and Hands on training on “Design and characterization of nanomaterials” organized by NIPER – Raebareli from 27th June 2022 – 1st July 2022.
16. Delivered scientific presentation on “Dendrimers: A New Dimension in the Application of Polymers for Targeted Treatment of Cancer” in SPER 10th Annual International Conference & Exhibition (SPER 2021) jointly organized by SPER, India and Ganpat University, Faculty of Pharmacy, Mehsana (Gujarat), India on October 8-9, 2021.
17. Delivered an invited lecture “QbD in formulation development of Nanomedicines” on July 16, 2021 in AICTE-ATAL Academy sponsored Online FDP organized by University College of Pharmaceutical Sciences, Acharya Nagarjuna University Guntur, AP on “Quality by Design (QbD) Tools for Drug Development” conducted from July 13-17, 2021.
18. Delivered an expert session on April 29, 2021 in AICTE sponsored one week Short Term Training Program (STTP) on topic entitled “Interplay between Health Wellbeing, Environment and Community Pharmacy” conducted from 26th April to 1st May, 2021.
19. Delivered invited lecture (webinar) on “Covid 19 Pandemic – Mutations and Vaccines” as guest speaker on May 18, 2021 at Oriental College of Pharmacy, Bhopal.
20. Chief Speaker in Online National Conference on “The COVID-19 Pandemic” organized by Shri Krishna University, Chhatarpur on May 11-14, 2020.
21. Chairperson in “International Conference of Cardiovascular Sciences” held at Delhi Pharmaceutical Sciences and Research University (DPSRU), New Delhi on February 21-23, 2020.
22. Presented research paper (Oral Presentation) titled “Formulation and Characterization of Microemulsion and Solid Dispersion to Improve Pharmaceutical Attributes of an Antitubercular Drug - Bedaquiline” in the SPER 11th Annual International Conference & Exhibition [SPER 2022] organized by SPER, India in collaboration with: Vivekananda Global University, Jaipur, India on November 18-19, 2022.

23. Presented research paper (Oral Presentation) titled “Development and evaluation of nano formulations and supersaturated drug delivery systems to improve biopharmaceutical attributes of bedaquiline fumarate” in International Symposium on Recent Trends and Future Opportunities in Pharmaceuticals, NIPER-Pharmacon-2022 held on November 10-12, 2022, and organized by NIPER-S.A.S. Nagar, Punjab.
24. Presented research paper (Oral Presentation) in SPER 10th Annual International Conference & Exhibition [SPER 2021] “Innovations in Healthcare: Integrating Academia and Industry” on the topic “Dendrimers: A New Dimension in the Application of Polymers for Targeted Treatment of Cancer” Jointly organized by Society of Pharmaceutical Education & Research [SPER] & Ganpat University, Faculty of Pharmacy, Mehsana (Gujarat) – India from 08 to 09 October 2021.
25. Presented research paper (Oral Presentation) in “International Conference of Cardiovascular Sciences” on the topic “Study on Anti-angiogenic activity of Dendrimers for Therapeutic Effect” held at Delhi Pharmaceutical Sciences and Research University (DPSRU), New Delhi on 21-23th February, 2020.
26. Presented research paper (Poster Presentation) in “International Conference of Cardiovascular Sciences” on the topic “Experimental Investigation of MDP Conjugated PPI Dendrimers for Macrophage Targeted Delivery” held at Delhi Pharmaceutical Sciences and Research University (DPSRU), New Delhi on 21-23th February, 2020.
27. Presented research paper (Oral Presentation) in International Conference [SPER-BANGKOK 2019] “Fostering Pharmaceutical Innovations to Bridge the Gap in Pharmaceutical Research and Industry” on the topic “Anti-angiogenic dendrimers for treatment of cancer” held at Narai Hotel, Bangkok, Thailand from 03 to 04 October 2019 and won Best Oral Presentation Award.
28. Presented Prototype on IOTA Healthcare solutions at Lufthansa Impact Week Delhi 2019 organized by Lufthansa Group at SSCBS, New Delhi from 18-26 Sept. 2019 and won most INNOVATIVE idea award for the same.
29. Participated in the Train the Trainer program of Lufthansa Impact Week Delhi 2019 organized by Lufthansa Group at SSCBS, New Delhi from 18-26 Sept. 2019
30. Presented research paper (Oral Presentation) in **24th International Conference on Bioencapsulation – 2016** on the topic “Core shell nanoparticles for oral delivery of low

molecular weight heparin” held at **Lusofona Universidae, Lisbon, Portugal** from 21 to 23 September, 2016. (Travel grant is awarded by ITS-SERB, DST New Delhi)

31. Presented research paper in the **International Conference on Innovations in Pharmaceutical Science** on the topic “Antiangiogenic surface engineered dendrimers for Targeted Delivery of Anticancer Drug” held at Sri Aurobindo Institute of Pharmacy, Indore on February 27-28, 2016.
32. Ph.D. research work was selected for presentation in BioAsia Innovation Award – 2015.
33. Presented research work on the topic “Targeted Delivery of Anticancer Drug with Antiangiogenic Dendrimers” in the **2nd International Symposium on Dendrimer in Nano Drug Delivery (ISDNDD-2014)** held at Auditorium, CSIR-CDRI, Lucknow (U.P.) on 14 and 15 June, 2014.
34. Presented research work as poster in the **International Conference FDEOLS-2014** held at Department of Biotechnology, Dr. H. S. Gour Central University, Sagar, M.P. on February 13-15, 2014.
35. Presented research work as poster and won the **1st prize in the International Conference NIPiCON-2014** held at Institute of Pharmacy, Nirma University, Ahmedabad, Gujrat on January 23-25, 2014.
36. Oral presentation on the topic “Surface engineered dendrimers based nanoplatfroms for treatment of cancer” and won the **Best International Oral Presentation Award** in **International congress ISC-2012** held at Bon Maharaj Engineering College, Vrindavan, Mathura, UP, India on December 08& 09, 2012.
37. Presented a poster entitled “Treatment of cancer with anti-angiogenic carrier for anticancer agent: dual attack on cancer” **3rd International Conference** on Stem Cells and Cancer (ICSCC-2012): Proliferation, Differentiation, and Apoptosis held at Dr. RML Hospital, New Delhi, India, 27 - 30 October, 2012.
38. Presented research paper in the **International Conference of Young Researchers on Advanced Materials (ICYRAM 2012)** on the topic “Dual strategy for treatment of cancer based on development of anti-angiogenic carrier for anticancer agent” held at **Matrix, Biopolis, Singapore** from 1 to 6 July, 2012.

39. Presented research paper as poster and won the **Best Poster Presentation Award** in **International Science Congress** held at Maharana Ranjit Singh College of Professional Sciences, Indore (M.P.) scheduled on December 24& 25, 2011.

➤ **ORGANIZED**

40. Organized Certificate course and Hands-on training on “Design and characterization of nanomaterials” from July 29, 2024 – August 2, 2024, as coordinator.
41. Kshitiz cultural event – 13.4.2023
42. Organized a National Seminar entitled “Novel Paradigms in Controlled Drug Delivery to Strengthen Innovation and Translation in Pharmaceutical Formulations” in collaboration with the Controlled Release Society on December 22, 2023.
43. Organized Certificate course and Hands on training on “Design and characterization of nanomaterials” from July 17, 2023 – July 21, 2023, as co-coordinator.
44. NIPER Raebareli organized a scientific quiz competition for M.S. Pharm. and Ph.D. students on National Science Day celebrated on 28.02.2023. The event was coordinated by Dr. Keerti Jain, Department of Pharmaceutics.
45. Organized Certificate course and Hands on training on “Design and characterization of nanomaterials” from June 27, 2022 – July 1, 2022, as co-ordinator.
46. Organized an international seminar (*via* virtual mode) entitled “Role of 3D Printing and AFM in Advancements of Drug Delivery Technologies” on August 31, 2021, at NIPER-R campus as a part of "Azadi Ka Amrit Mahotsav " in commemoration of 75 years of Indian Independence.
47. Organized an online webinar on “Advancements in Nanomedicines” on October 27, 2021, at NIPER-R campus as a part of "Azadi Ka Amrit Mahotsav" in commemoration of 75 years of Indian Independence.
48. Organizing an online workshop entitled “Application of Rheometer in Pharmaceutical Sciences” on 22 June 2021 at NIPER-R campus as a part of "Azadi Ka Amrit Mahotsav" in commemoration of 75 years of Indian Independence.
49. 12th International E-Symposium “Translational Research and Drug Delivery Systems” 15th and 16th February 2021 held at NIPER, Raebareli.

- 50.** Contributed to celebrating Rajbhasha Hindi Pakhwada – 2020 held in NIPER Raebareli during September 14-28, 2020.
- 51.** “International Conference of Cardiovascular Sciences” held at Delhi Pharmaceutical Sciences and Research University (DPSRU), New Delhi on 21-23 February 2020.
- 52.** Organized Pharmacy week 2019 at Delhi Pharmaceutical Sciences and Research University (DPSRU) from 21-25 October 2019 as Co-coordinator.
- 53.** Co-ordinated training cum workshop on Rheometer at Delhi Pharmaceutical Sciences and Research University (DPSRU), held on 27 August 2019.
- 54.** National conference on Pharmacovigilance, Pharmacoeconomics and Outcomes Research held at Delhi Institute of Pharmaceutical Sciences and Research (DIPSAR), New Delhi on 9th and 10th October 2018.