

Reena Jatyan

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<https://scholar.google.com/citations?user=bJCpa7MAAAAJ&hl=enhttp>



Academic Profile

Ph.D.

(Pharmaceutical Sciences)

September 2019 to till now

Title of thesis: "Temozolomide-fatty acid conjugate-based nanomedicine for the treatment of Glioblastoma Multiforme."

Thesis Supervisor: Prof. Deepak Chitkara,
Department of Pharmacy, Birla Institute of
Technology and Science Pilani (BITS-Pilani),
Pilani Campus, Rajasthan, India

M. Pharmacy

(Pharmaceutical Biotechnology)

2017-2019, (86.32%) Gold Medalist

School of Pharmaceutical Education & Research
(SPER) Jamia Hamdard, New Delhi

B. Pharmacy

2013-2017, (75.86%)

College of Pharmacy, Pt. Bhagwat Dayal Sharma
University of Health Sciences in Rohtak, Haryana,
India

List of Awards and Achievements

1. **Lady Tata Junior Research Fellowship** by Lady Tata Memorial Trust, India.(2021-2023)
2. **DST-Junior Research Fellow** by Department of Science and Technology (DST), Rajasthan, India. (2019-2021)
3. **Qualified in National level Examination - 2013** (Graduate Pharmacy Aptitude Test (GPAT) Examination)
4. Awarded with **Gold Medal** Certificate for securing **1st Rank** in M. Pharmacy at Jamia Hamdard University, New Delhi, India.
5. **Best Poster presentation** awards in NIPERCOM 2022 at NIPER, Mohali.
6. **Best Poster presentation** awards in the National Festival College at SMS College, Jaipur.

List of Publications

1. **Reena Jatyan**, Prabhjeet Singh, Deepak Kumar Sahel, Karthik YG, Anupama Mittal, Deepak Chitkara. Polymeric and small molecule-conjugates of temozolomide as improved therapeutic agents for glioblastoma multiforme. *Journal of Controlled Release*. 2022 Oct 1;350:494-513. (**Impact Factor-11.4**).
2. **Reena Jatyan**, Deepak Kumar Sahel, Prabhjeet Singh, Anupama Mittal, Deepak Chitkara. Temozolomide-fatty acid conjugates for glioblastoma multiforme: In vitro and in vivo evaluation. *Journal of Controlled Release*. 2023 Jul 1; 359:161-74. (**Impact Factor-11.4**).
3. Medha Bhat, **Reena Jatyan**, Anupama Mittal, Deepak Chitkara. Bhat M, Jatyan R, Mittal A, Mahato RI, Chitkara D. Opportunities and challenges of fatty acid conjugated therapeutics. *Chemistry and Physics of Lipids*. 2021 May 1;236:105053. (**Impact Factor-3.57**).
4. Deepak Kumar Sahel, Sangam Giri Goswami, **Reena Jatyan**, Anupma Kumari, Anupama Mittal, Sivaprakash Ramalingam, Deepak Chitkara. Lipopolymeric nanocarrier enables effective delivery of CRISPR/Cas9 expressing plasmid. *Macromolecular Rapid Communications*. 2023 Apr 25:2300101. (**Impact Factor-5.0**).
5. Nishtha Chaurawal, Charu Misra, Harshita Abul Barkat, **Reena Jatyan**, Deepak Chitkara, Md Abul Barkat, Teenu Sharma, Bhupinder Singh, Kaisar Raza. Oral sorafenib-loaded microemulsion for breast cancer: Evidence from the in-vitro evaluations and pharmacokinetic studies. *Scientific Reports*. 2022 Aug 12;12(1):13746. (**Impact Factor-4.9**)

List of Patents

1. Quinazoline Based Compounds and Pharmaceutical Compositions Thereof, Application number 202311002668 filed on 12 Jan 2023
2. A Self-Assembling Drug Conjugate and Method of Preparation thereof. Indian Patent Application no. 201911018304, Filed on May 06, 2020, Applicant: Birla Institute of Technology and Science (BITS), Pilani (Granted).

Technical skills

1. Design, development & evaluation of **Nano Technology based drug delivery systems**
 - Design, development & evaluation of lipid-polymer hybrid (LPH) nanoparticles.
 - Design, development & evaluation of self-assembled drug-lipid conjugates micelles.
 - Design, development & evaluation of solid lipid nanoparticles (SLNs).
2. Design, Synthesis, and characterization of **Prodrug conjugates**
 - Design and synthesis of drug-fatty acid conjugates such as TMZ-oleic acid, TMZ-Palmitic acid, TMZ-Linoleic acid, and TMZ-Alpha lipoic acid conjugates.
3. Bioanalytical method development and validation of small molecules.
4. *In vivo* pharmacokinetics (in rats), tissue distribution study, nano formulation-toxicity study.
5. *In vitro* cell culture & molecular biological studies: Transfection, endocytic uptake & sub-cellular pathway mechanism, flow cytometry, confocal and fluorescence microscopy, RT-PCR, agarose gel electrophoresis, western blotting, cytotoxicity, apoptosis, cell cycle, cellular uptake.
6. Well acquainted in animals (Mouse, Rats) handling.

7. Conducting efficacy studies in the GBM rat model.
8. Knowledge of formulation scale-up & analytical instruments like,
 - High-Pressure Homogenizer, HPLC, NMR, FTIR, UV Spectrophotometer, Spectrofluorometric, Elisa Plate reader, DSC, TGA, Flow cytometer, Gel Electrophoresis, Fluorescence Microscopy, RTPCR, Thermocycler, Dissolution Apparatus, Disintegration Apparatus, Hardness Tester, etc.
9. Expertise on handling software and data interpretation: Phoenix WinNonlin for PK/PD data analysis, Gel-Doc for molecular biology assay, ImageJ for subcellular co-localization analysis, Graph pad Prism & Origin for data analysis & statistics, NMR software, etc.
10. Good knowledge on developmental and evaluation aspects of NDDS (nanoparticles, microparticles, liposomes) and familiar with knowledge of formulation of conventional dosage forms with pre-formulation studies.

Conferences Attended

- 1) **Reena Jatyan**, Deepak Kumar Sahel, Anupama Mittal, Deepak Chitkara. Poster presentation on "Fatty acid Conjugated Temozolomide for the Treatment of Glioblastoma Multiforme" at International Symposium on Recent Trends and Future Opportunities in Pharmaceuticals of NIPERCOM 2022 November held on 10-12, 2022. (**Awarded Best Poster Award and prize money of Rs. 7500/-**)
- 2) **Reena Jatyan**, Deepak Kumar Sahel, Anupama Mittal, Deepak Chitkara. Poster presentation on "Prodrug Strategy to Improve Temozolomide Efficiency for the Treatment of Glioblastoma Multiforme" at National Science Festival on February 27-28, 2023, at SMS Medical College Jaipur. (**Awarded Best Poster Award and prize money of Rs. 10,000/-**)
- 3) **Reena Jatyan**, Deepak Kumar Sahel, Anupama Mittal, Deepak Chitkara. Poster presentation on "Temozolomide-lipoic acid conjugate as self-assembled nanomedicine for effective treatment of Glioblastoma Multiforme" at 21st International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems by Controlled Release Society (CRS) Indian Local Chapter, held on 24 and 25 February 2023

Personal Details

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| 1. Full Name: Reena Jatyan | 4. Date of birth: 11 th April 1995 |
| 2. Gender: Female | 5. Marital Status: Unmarried |
| 3. Nationality: Indian | 6. Languages: English, Hindi |

I am hereby certifying that all the aforementioned information is true as per the best of my knowledge.

Reena

Professional References

Prof. Deepak Chitkara (PhD, Post Doc)

Associate Professor

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Prof. Anupama Mittal (Ph.D., Post Doc)

Associate Professor

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Prof. Rajeev Sakhuja (PhD)

Associate Professor

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