Curriculum Vitae (Bio-data)

Shailesh Sanjay Dugam
Ph.D. research scholar (DST-INSPIRE, Senior Research Fellow)
Department of Pharmaceutical Sciences and Technology
Institute of Chemical Technology (ICT),
Matunga, Mumbai 400019 India

Date of Birth: May 10, 1995 **Nationality:** Indian

Personal Details: Mobile: +91-7756812379/7020493629
Email: shailesh.dugam@nano-medicine.co.in /shaileshdugam2016@gmail.com

Education

Sep 2020-Sep 2025 Ph. D. (Tech, Pursuing)
Institute of Chemical Technology (ICT), Matunga, Mumbai.
Topic: 'Development of Polymeric nanofibers for Biomedical application'

June 2017-June, 2019 Master of Pharmaceutics (Gold medalist)
CGPA obtained: 8.88 (First Class with Distinction)
Bharti Vidyapeeth College of Pharmacy, Kolhapur
Shivaji University, Kolhapur, India; Rank: 1st

June 2013- June 2017 Bachelor of Pharmacy
Marks Obtained: 70.50% (First Class with Distinction)
Shri. Appasaheb Birnale College of Pharmacy, Sangli
Shivaji University, Kolhapur

Positions

Oct 2021- Present **DST Inspire Senior Research Fellow**
Institute of Chemical Technology (ICT),
Matunga, Mumbai, India
The work involved designing and developing a biopolymeric-based enzyme-immobilized transmucosal patch to treat Gaucher's disease. Current treatments available to treat Gaucher's disease like enzyme replacement therapy, and substrate reduction therapy restricted its application due to high cost, non-patient compliance, and inability to achieve the required therapeutic response hence to mitigate this problem we are focused on developing better alternatives to treat enzyme deficiency disorder

Oct 2020- Sep 2021 **Junior Research Fellow**
Institute of Chemical Technology (ICT),
Matunga, Mumbai, India
The work involved the design and development of biopolymeric-based nanocomposites for wound healing applications. Currently, there are several biomaterial-based wound dressings available for healing diverse types of wounds. However, commercial wound-care dressings are too expensive to be affordable to the

population in middle and lower-socioeconomic populations around the world. Hence, the major challenge is not only to develop an effective wound-care dressing that has comparable efficacy to the existing ones but also to achieve cost-effectiveness during its production and use. Thus, to address the aforesaid issue, we developed a triple-layered nanofibrous wound healing dressing; as a more economical and safe intervention, for more efficient healing of chronic wounds

Oct, 2019- Sep,2020 **Lecturer,**
Nava-Sahyadri Institute of Pharmacy, Naigoan (Pune)

Published/Accepted Manuscripts (*Corresponding author/s)

1. **Dugam Shailesh,** Jain R*, Dandekar P*., Silver nanoparticles loaded triple-layered cellulose-acetate based multifunctional dressing for wound healing, International Journal of Biological Macromolecules, Volume 276, Part 1, IF 7.7
2. Desai Ranjeet, Jaiswal Rahul, Manchekar Triveni, **Dugam Shailesh**, Jain R*, Dandekar P*, Enhancing monoclonal antibody stability during protein chromatography B using 2-methyl imidazolium dihydrogen phosphate, Journal of Chromatography B, Volume 1773, IF 3.21
3. Padwal Vijay, Narvekar Aditya, **Dugam Shailesh**, Pachpore Radhika, **Dandekar P*,** Jain R*. Elucidating the role of 2-methyl imidazolium dihydrogen phosphate in preventing aggregation of Bevacizumab: a biophysical investigation, Journal of Molecular Liquids, 390, 122968, 2023. IF: 6.0
4. **Dugam Shailesh**, Nangare Sopan, Gore Anil, Wairkar Sarika, Patil Pramod, Choudary Latika, Jadhav Namdeo*, Crystallinity modulated silk fibroin electrospun nanofibers based floating scaffold as a candidate for controlled release of felodipine, International Journal Polymeric Materials and Polymeric Biomaterials, 2022, vol. 71, no. 18, 1393–1406, if 3.2
5. **Dugam Shailesh**, Tade Rahul, Dhole Rani and Nangare Sopan *, Emerging era of microneedle array for pharmaceutical and biomedical applications: recent advances and toxicological perspectives, Future Journal of Pharmaceutical Sciences (2021) 7:19, IF 2.6
6. Nangare Sopan, Vispute Yogita, Tade Rahul, **Dugam Shailesh**, Pravin Patil*, Pharmaceutical applications of citric acid, Future Journal of Pharmaceutical Sciences (2021) 7:54, IF 2.6
7. **Dugam Shailesh**, Nangare Sopan, Patil Parvin, Jadhav Namdeo* Carbon dots: A novel trend in pharmaceutical applications, Annales Pharmaceutiques Françaises, Volume 79, Issue 4, Page Number 335-345, IF 1.36
8. Nangare Sopan, **Dugam Shailesh**, Patil Pravin, Tade Rahul, Jadhav Namdeo*, Silk industry waste protein: isolation, purification, and fabrication of electrospun silk protein nanofibers as a possible nanocarrier for floating drug delivery, Volume 32, 3, IF 2.9
9. Rathod Prashant, More Harinath, **Dugam Shailesh**, Velapure Pallavi, Namdeo Jadhav Namdeo*, Fibroin-Alginate Scaffold for Design of Floating Microspheres Containing Felodipine, Journal of Pharmaceutical Innovation (2021) 16:226–236, IF 2.48
10. Shitole Mayuri, **Dugam Shailesh**, Tade Rahul, Nangare Sopan*, Pharmaceutical applications of silk sericin, Annales Pharmaceutiques Françaises, Volume 78, Issue 6, Page Number 469-489, IF 1.36
11. **Dugam Shailesh**, Nangare Sopan*, Smart invasome synthesis, characterizations, pharmaceutical applications, and pharmacokinetic perspective: a review, Future Journal of Pharmaceutical Sciences (2020) 6:123, IF 2.6

12. Shitole Mayuri, **Dugam Shailesh**, Desai Neha, Tade Rahul, Nangare Sopan*, Pharmaceutical applications of electrospun nanofibers: As state-of-the-art-review, Asian Journal of Pharmacy and Technology 10 (3), 187-201, 2020
13. Nangare Sopan*, Tade Rahul, **Dugam Shailesh**, Shitole Mayuri, Progress in erectile dysfunction therapy through drug delivery system, Thai Journal of Pharmaceutical Sciences (TJPS), Volume 44, Issue 2

Book Chapter (Published)

1. Dugam Shailesh, Ratnesh Jain and **Prajakta Dandekar**, Polyrotaxane Polymers for Nucleic Acid Delivery in Engineered Biomaterials: Progress and Prospects, (Eds. P A Hassan, Biji Balakrishnan, A K Tyagi), World Scientific Publishing Co PTE Ltd., Chapter 16, pp 657-693, September 2023

Patents/ Trademarks/Designs

1. **Dugam Shailesh**, Ratnesh Jain and Prajakta Dandekar, Multifunctional silver nanoparticle loaded electrospun triple-layered biodegradable nanofiber wound dressing, Indian Patent Application No: IN202421054476, August 2024 (Published)

Awards, Fellowship and Academic Credentials

- **InSC-Young Researcher Award**:2024
- **DST-INSPIRE Fellowship** to pursue doctoral studies (September 2021-September 2026)
- **Junior Research Fellow** (JRF) by the DST Nanomission-Government of India (October 2020-September 2021).
- I hold the prestigious Shivaji University 'Merit Rank' for **Master of Pharmacy**, earned during the years 2017-2019. (**Rank First -Gold medallist**)
- Selection **of Inspire Scholarship for BS-MS program**

Awards, participation in Conferences, Workshop

1. **Best Health Idea Award**, for delivering oral presentation on "Development of Biopolymeric based artificial skin substitute to treat chronic wounds" at RGSTC: Accelerating Technology Commercialization ATC3.0, IIT Bombay, Sept 2023.
2. **Poster Presentation** on the Development of triple-layered nanofibrous bandage as a wound dressing material, at **22nd International Symposium on Advances Technology** and Business Potential of New Drug Delivery Systems, Feb 29- Mar 01, 2024
3. **Selection for Top 5 oral presentation** on the Development of silver nanoparticle incorporated triple-layered nanofibrous dressing for chronic wounds, at International Symposium on Advances in Drug Delivery Technologies (ADDT-2024) on February 16th-17th, 2024 at BITS Pilani, Pilani Campus, India
4. **Participation in Advances in 3D cell-culture workshop and conference** (3D cell-culture workshop 29th January -4th Feb 2023) as an organizing team member held at, Venue for the Conference: Taj The Trees, Mumbai, organized by Nano-medicine Research Group, ICT Mumbai (Convenor-Dr. Prajakta Dandekar)

5. **Participation in Biosimilar workshop (**Biosimilar workshop, 2nd-3rd Feb 2022) as an organizing team member held at, Novatel Goa, Dona Sylvia Resort, organized by Nano-medicine Research Group, ICT Mumbai (Convenor-Dr. Ratnesh Jain)
6. **Secured 2nd Position for poster presentation** at "International Conference on Recent Advances in Nanotechnology and Radiopharmaceuticals in Drug Design and Development" at Surat in February 2019
7. **Secured 3rd Position for poster presentation** in "AVISHKAR 2018'' Poster presentation competition at Shivaji University, Kolhapur in December 2018 •
8. **Secured 3rd position in National level poster presentation competitio**n "Pharma vision 2016" at Vadodara, Gujrat in 2016

Co-curricular Activities Performed

Proposal and Grant Writing:

1. Development of biopolymeric electrospun nanofibers for Gaucher disease (DST- Technology Transfer Rare Disease)
2. Preclinical investigations of biopolymeric electrospun nanofibers and their preclinical investigation for the treatment of Gaucher disease (ICMR –Therapeutics under rare disease)
3. Depolymerization of beta-glucan using ionic liquid (Harmony Life Science)
4. To develop an economical, paper-based device for the early detection of circulating tumor DNA (ctDNA) with TP53 mutation for early cancer diagnosis (ICMR- Adhoc)
5. Prospective, Single-center, Randomized, Controlled Trial for investigating the use of 3D starch–gelatin scaffolds for the Management of Diabetic Foot Ulcers (RGSTC)
6. Development of cell therapies for corneal disorders and application of macromolecular crowders for enabling their commercially viable storage (SERB-SURE)

Industry Projects worked on

- Harmony Life Sciences (Depolymerization of beta glucagon using ionic liquid)
- Endo-Par (NMR Investigation for Bio similarity and aggregation behavior of peptides)
- CIPLA (NMR Investigation for dimer impurities)
- Biogenomics (NMR Investigation for Bio similarity studies of peptides)