

DR. (MRS.) RAJANI B. ATHAWALE

Designation	PROFESSOR OF PHARMACEUTICS
Date of Joining	24/06/2015
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EDUCATIONAL QUALIFICATION

Degree	Specializations	Awarding University	Awarded Year
Ph.D. (Tech)	Pharmaceutics	S.N.D.T.Women's University, Mumbai	2007
M. Pharm	Medicinal & Natural Products	U.D.C.T., (Now ICT), University of Mumbai	1994
B. Pharm	Pharmacy	U.D.C.T., (Now ICT), University of Mumbai	1991

COURSES TAUGHT

Class	Semester	Subject code	Name of the subjects
First Year B. Pharm	I	BP103T	Pharmaceutics
	II	BP206T	Environmental Studies
T. Y. B. Pharm	V	BP502T	Industrial Pharmacy I (TH)
	BP809ET	BP506 PR	Industrial Pharmacy I (PR)
Final Year B. Pharm	VII	BP702T	Industrial Pharmacy I
	VIII	BP704T	NDDS
	VIII	BP809 ET	Cosmetic Science - Theory
M. Pharm	I	MP 103 T	Modern Pharmaceutics
	I	MP 102T	Drug Delivery System
	II	MP 201 T	Molecular Pharmaceutics
	II	MP 203 T	Computer Aided Drug Delivery

RESEARCH STUDENT GUIDED/ONGOING

Degree	Specialization	Ongoing	Completed
Ph. D (Tech)	Pharmaceutics	4	6
M. Pharm	Pharmaceutics	3	55

AREA OF RESEARCH

- + Conventional Drug Delivery Systems
- + Cosmetics
 1. Skin whitening products
 2. Anti-wrinkle and anti-aging formulations
 3. Face masks
- + Development of Nano-carriers For anticancer formulations
 1. Etoposide Solid Lipid Nanoparticles for treatment of lung cancer
 2. Temozolomide PLG-PLA nanoparticles
 3. Doxorubicin liposomal drug delivery systems
 4. Long-acting peptides
- + Nutraceuticals
- + Ayurvedic formulations

INDUSTRY PROJECTS

Title of the projects	Amount (Lakhs)	Funding	Status
Fabrication & Characterization of Surface Modified Biodegradable Polymer based Parenteral Drug Delivery	15.21 Lakhs	AICTE RPS	Ongoing
Design & Evaluation of Inhalers	3.0 Lakhs	Paras Products	Ongoing
Polymer Synthesis & Development of Long-Acting Preparations	0.70	University of Mumbai	Completed
<i>In-vivo</i> Studies of Liquid filled capsule	1.64	Associated Capsules	Completed
Design & Characterization of Liquid Filled Capsules	0.50	Associated Capsules	Completed
Design and Evaluation of Nutraceutical Tablets & Capsules	0.65	Siddhartha International	Completed
Development of Ayurvedic Formulations	0.35	Criya Pharmaceuticals	Completed
Design & Evaluation of Surface Modified Nanocarriers for Treatment of Breast Cancer	12.00 Lakhs	UGC MRP	Completed
Evaluation of Film Forming Properties of Polymers	0.40	Ideal Cures Ltd	Completed
Design & Evaluation of Phyto liposomes	2.5	Mind Pharma, Pune	Completed
Design & Evaluation of Nanocarriers For Treatment of Breast Cancer	19.5	AICTE RPS	Completed
Development of Pediatrics Stable Suspensions	0.50	Simson Pharma	Completed
Design and Evaluation of Surface Modified Nanocarriers for Targeting Solid Tumors	46.26 Lakhs	DBT	Completed
Hemorheological Study of Antihypertensive Therapies	10.23 Lakhs	AICTE RPS	Completed
Design and Evaluation of Lipid Based Drug Delivery Systems	1.05 Lakhs	S.N.D.T. Women's University	Completed

LIST OF PUBLICATIONS:

1. N Patil, M Baburaj, R Narkhade, R Athawale, Evaluation of a novel local drug delivery system containing tetracycline hydrochloride microparticles as an adjunct to mechanotherapy in the management of chronic periodontitis. Journal of Dental Research & Review 9 (4),2022
2. R Narkhede, R Athawale, N Patil, MD Baburaj, Formulation, evaluation, and clinical assessment of novel solid lipid microparticles of tetracycline hydrochloride for the treatment of periodontitis, AAPS PharmSciTech 22 (5), 162, 2021

3. RG Narkhede, RB Athawale, Screening of Selective C16 to C18 Lipids and process optimization based on design of experiments in formulating solid lipid microparticles by twin screw hot melt dispersion process, *Journal of Pharmaceutical Innovation* 17 (3), 940-954,2022.
4. AR Singh, PK Desu, RK Nakkala, V Kondi, S Devi, MS Alam, H Hamid, "Nanotechnology-based approaches applied to nutraceuticals, *Drug Delivery and Translational Research*, 1-15.,2021
5. B Gorain, H Choudhury, N Molugulu, RB Athawale, P Kesharwani, "Fighting strategies against the novel coronavirus pandemic: impact on global economy, *Frontiers in public health* 8, 606129,2020
6. Geeta Bhagwat, Rajani Athawale et al, Formulation & Development of Transferrin Targeted Solid Lipid Nanoparticles for Breast Therapy , *Frontiers in Pharmacology*, Volume 11, Article 614290,Nov 2020
7. Puro D, Athawale R, Pandya A. Design, Optimization and Characterization of Nanostructured Lipid Carriers of Raloxifene Hydrochloride for Transdermal Delivery. *Nanoscience & Nanotechnology-Asia*. 2020 Feb 1; 10 (1):57-67.
8. Anjali Pandya, Rajani Athawale, Durga Puro, Geeta Bhagwat , " Design & Evaluation of Long Acting PLGA microspheres for Ocular Drug Delivery,"*Nanoscience & Nanotechnology- Asia* (2021)
9. Prachi Mehendale, Rajani Athawale, Singh KK, Development and Validation of Rapid and Simple Bioanalytical Method for Docetaxel with One Step Protein Precipitation, *Indian Drugs*, 56(7),23-32,2020
10. P Mehendale, R Athawale , Dry Powder Inhaler of a Cytotoxic Agent, a New Avenue as Drug Delivery for the Lung Cancer, *Proceedings of International Conference on Drug Discovery (ICDD)*
11. Kole SS, Gotmare VD, Athawale RB. Novel approach for development of eco-friendly antimicrobial textile material for health care application. *The Journal of The Textile Institute*. 2019 Feb 1; 110 (2):254-66.
12. VD Gotmare, SS Kole, RB Athawale, "Sustainable approach for development of antimicrobial textile material using nanoemulsion for wound care applications, *Fashion and Textiles* 5 (1), 1-13,2018.
13. Chhabra N, Solanki A, Athawale R, Mahajan S,: RP-HPLC method development and validation of tetrahydrocurcumin using multilevel full-factorial design in bulk, nanoemulsion and liposomes. *European Journal of Pharmaceutical and Medical Research*. 2017; 4(9):275-281.
14. S.S Kole, V.D Gotmare, R. B Athawale: *Advances in Biodegradable Polymers a new route for Development of Eco-Friendly Medical Textile Products for Healthcare Applications: An Overview*, paper published in *Journal of Textile Association*, Sept-Oct 2017.
15. SA Wagle, D Jain, S Rathod, R Athawale, A Bajaj, Development and validation of inductively coupled plasma atomic emission spectroscopy [icp-aes] analytical method for estimation of cisplatin in biological samples, *Indian Journal Of Pharmaceutical Education And Research* 51 (4), S783-S789,2017.
16. Bhagwat G. and Athawale R.**Design And Evaluation of Stealth Liposomes Encapsulating Vinorelbine Tartarate*, *Indian Drugs*, May 2016, vol. 53,Issue 5 pg no. 17-21, May 2016.

17. D Jain, A Bajaj, R Athawale, S Shrikhande, PN Goel, Y Nikam, R Gude, Surface-coated PLA nanoparticles loaded with temozolomide for improved brain deposition and potential treatment of gliomas: development, characterization and in vivo studies, *Drug delivery* 23 (3), 989-1006,2016
18. DS Jain, AN Bajaj, RB Athawale, SS Shikhande, A Pandey, PN Goel, "Thermosensitive PLA based nanodispersion for targeting brain tumor via intranasal route, *Materials Science and Engineering: C* 63, 411-421,2016.
19. Valvi AR, Mouriya N, Athawale RB, Bhatt NS. Hepatoprotective ayurvedic plants—a review. *Journal of Complementary and Integrative Medicine*. 2016 Sep 1;13(3):207-15.
20. Mouriya N, Valvi A, Athawale R, Bhatt N. Design development and evaluation of triphala tablets. *Journal of Complementary and Integrative Medicine*. 2017 Mar 9;14(2).
21. Dixit K, Athawale RB, Singh S. Quality control of residual solvent content in polymeric microparticles. *Journal of microencapsulation*. 2015 Feb 17;32(2):107-22.
22. Dixit K, Bandbe SG, Laghate G, Athawale RB. Development of Taste Masked Microspheres of Thiocolchicoside by Microencapsulation. *Journal of Nanopharmaceutics and Drug Delivery*. 2014 Jun 1;2(2):118-26.
23. Bandbe SG, Dixit K, Laghate G, Athawale RB. Article Details Development of Gastro-retentive Floating Microspheres of Ondansetron Hydrochloride. *Indian Drugs*, 2014, 51 (8), 22-27.
24. Shruti Shrikhande, Darshana Jain, Rajani B. Athawale and Amrita N. Bajaj. "Nanoparticulate drug delivery system for treatment of Hepatocellular carcinoma", *Current cancer therapy review*, 2014, 10, 22 – 23.
25. Shrikhande SS, Jain DS, Athawale RB, Bajaj AN, Goel P, Kamran Z, Nikam Y, Gude R. Evaluation of anti-metastatic potential of Cisplatin polymeric nanocarriers on B16F10 melanoma cells. *Saudi Pharmaceutical Journal*. 2015 Sep 1; 23(4):341-51.
26. Shrikhande SS, Jain DS, Athawale RB. Development and Validation of a U.V Colorimetric method for Estimation of Cisplatin in Pharmaceutical Formulations. *Indian Drugs*, 2014, 51(7), 23 – 30.
27. Athawale RB, Jain DS, Singh KK, Gude RP. Etoposide loaded solid lipid nanoparticles for curtailing B16F10 melanoma colonization in lung. *Biomedicine & Pharmacotherapy*. 2014 Mar 1; 68(2):231-40.
28. Jain D, Athawale R, Bajaj A, Shrikhande S. Double-salting out assisted liquid–liquid extraction (SALLE) HPLC method for estimation of temozolomide from biological samples. *Journal of Chromatography B*. 2014 Nov 1; 970: 86-94.
29. Jain DS, Athawale RB, Bajaj AN, Shrikhande SS, Goel PN, Nikam Y, Gude RP. Unraveling the cytotoxic potential of Temozolomide loaded into PLGA nanoparticles. *DARU Journal of Pharmaceutical Sciences*. 2014 Dec 1; 22(1):18.

30. Jain DS, Athawale RB, Bajaj AN, Shrikhande SS, Goel PN, Nikam Y, Gude RP. Poly lactic acid (PLA) nanoparticles sustain the cytotoxic action of temozolomide in C6 Glioma cells. *Biomedicine & Aging Pathology*. 2013 Oct 1; 3(4):201-8.
31. Jain D, Athawale R, Bajaj A, Shrikhande S, Goel PN, Gude RP. Studies on stabilization mechanism and stealth effect of poloxamer 188 onto PLGA nanoparticles. *Colloids and Surfaces B: Biointerfaces*. 2013 Sep 1; 109: 59-67.
32. Sana S, Rajani A, Sumedha N, Mahesh B. Formulation and evaluation of taste masked oral suspension of dextromethorphan hydrobromide. *Int J Drug Dev Res*. 2012 Apr; 4: 159-72.
33. Sana S, Rajani A, Sumedha N, Pravin P, Shripad N. Development and validation of RP-HPLC method for the estimation of N-Acetylcysteine in wet cough syrup. *International Journal of Drug Development & Research*. 2012 Apr; 4(2):284-93.
34. Sana S, Rajani A, Sumedha N, Pravin P, Shripad N. Reversed Phase HPLC Method for the Estimation of Acetaminophen in Infant Drops. *International Journal of Pharmaceutical Frontier Research (IJFR Journal)*, 2012, 2(1), 39-47.
35. RB Athawale, SS Regee, V Tawade, Formulation and evaluation of herbal nutraceutical tablet for malnutrition, *Int J Ayur Herbal* 1, 1-6,2011
36. Rajani Athawale, Swapnali Bhaskar, Chetan Rajsharad, Noorjahan Aibani, "Study and evaluation of various PVA- Based Film Coating Systems of Instacoat", *The Pharma Review*, 2011, 9 (54), 99-105.
37. Shamika S, Rashmi T, Shambhavi R, Rajani A. Cosmeceutical Liposomes of Vitamin E Acetate for Skin Health. *SÖFW-Journal*. 2011;137(12).
38. Salavkar SM, Tamanekar RA, Athawale RB. Antioxidants in skin ageing–Future of dermatology. *International Journal of Green Pharmacy (IJGP)*. 2011; 5(3).
39. S Desai, A Doke, J Disouza, R Athawale, Development and evaluation of antifungal topical niosomal gel formulation, *Int J Pharm Pharm Sci* 3 (5), 224-31,2011
40. Tamanekar R, Salavkar S, Athawale R. Pilosebaceous Targeting–An Emerging Concept in Topical and Cosmetic Science. *Research Journal of Topical and Cosmetic Sciences*. 2011;2(2):45-51.
41. Shahi S, Athawale R, Ghadge S. Skin Health-Aging-Wrinkles and Remedies. *SÖFW-journal*. 2008; 134(5), 2-16.
42. Shahi S, Athawale RB. Development and evaluation of Cosmeceutical Nanolipogel. *Research Journal of Topical and Cosmetic Sciences*. 2010; 1(1):18-24.
43. Athawale R, Ghadge S, Shahi S, Singh A. Design and Evaluation of Buccoadhesive Microspheres for Smoking Cessation. *Research Journal of Pharmaceutical Dosage Forms and Technology*. 2010; 2(1):90-5.
44. Athawale RB, Ghadge SM, Shahi SS. Spectrophotometric analysis of nicotine bitartrate dihydrate in pure form and in formulations. *Asian Journal of Chemistry*. 2010 Apr 20; 22(4):2501.

45. Shahi S, Athawale R. Quantitative HPTLC analysis of palmitoyl hexapeptide. JPC-Journal of Planar Chromatography-Modern TLC. 2010 Oct 1; 23(5):365-8.

PATENTS & TRADEMARK:

Year	Name	Title	Application Details	Date	Collaborator	Status
2018-19	Dr. Rajani Athawale, Shraddha Devandra, Nilima Gupta	Curcuminoid Liquid composition for filling in hard capsules	Application No. 201821028248	27.07.2018	ACG	Published
2021-22	Dr. Rajani Athawale	Nanocarrier Based Cosmetics Composition Containing Kojic Dipalmitate and Vitamins	2394/MUM/2013	17.7.2013	Self	6.5.21 Granted
2020-21	Dr. Rajani Athawale, Rajkiran Narkhede, Dr. Mala Dixit, Dr. Nikita Patil	A Solid Lipid Matrix Composition Comprising Tetracycline Hydrochloride	20201031705	24.7.2020	Nair Dental College	Granted

✚ Filed Trade Mark Perioprotect

BOOKS CHAPTERS:

✚ Lipid based nanoparticles for targeted drug delivery of anticancer drug, Shegokar R., Athawale R., Kurup, N., Yang R., Chougule M. In: Nanotechnology-Based Approaches for Targeting and Delivery of Drugs and Genes, Ed: Mishra, V., Kesharwani, P., Amin MC, and Iyer, A., Publisher: Elsevier Science and Technology, USA, 2016.

✚ Clinical Pharmacology and Uses in Human and Veterinary Medicine. In: Anthelmintics: Clinical Pharmacology and Uses in Veterinary Medicine and Efficacy, Shegokar R, Athawale RB, Jain D, Edited by Quick W. New York Nova Science Publishers, USA, 2014.

CONFERENCE, SEMINAR, WORKSHOP, SYMPOSIUM AND WEBINARS

✚ Research work on “Design and Evaluation of Target Oriented Drug Delivery Systems” awarded 1st prize at Avishkar (State level Inter-University research competition) held at Nagpur University on 14th-16th February 2007.

✚ Research work on, “Development and evaluation of cosmeceutical liposomal formulation” awarded 2nd prize for oral presentation on, in the Second International Annual conference on “Drug Discovery and

Development – South Asian Perspective” organized by South Asian Chapter of American College of Clinical Pharmacology held on 4th and 5th October, 2008.(Mumbai)

AWARDS RECEIVED BY RESEARCH TEAM:

- ✦ Awarded the first best oral presentation award for the topic entitled “Targeting drug to cancer cells: need of the hour ”. By Geeta Bhagwat., Athawale R. B., at inter University Convention Avishkar 2016-17 in the field of Medicine and Pharmacy in post graduate level.
- ✦ Awarded the second best poster award for the topic entitled "*In vitro* BBB model to assess passage of compounds into the brain." by Jain Darshana., Athawale R.B., Bajaj A, Shrikhande S. at Seminar-cum-Workshop On Recent Strategies in CNS Drug Development Under TEQIP Support on 31st October-1st November 2012 Organized by Institute of Chemical Technology Department of Pharmaceutical Sciences Technology UGC-Center of Advance Studies.
- ✦ Awarded the second best oral presentation award for the topic entitled "Nanoparticles for potential treatment of Brain tumors". By Jain Darshana, Athawale Rajani, Bajaj Amrita, Shrikhande Shruti, Goel Peeyush, Nikam Yuvraj, Gude Rajiv, at inter University Convention Avishkar ,5/02/2012-13 to 7/02/2012-13 in the field of Medicine and Pharmacy in Ph D level conducted at Dhapoli, Ratnagiri.
- ✦ Awarded the first best oral presentation award for the topic entitled “Development of Floating Microspheres -An Alternative Approach ”. By Laghate G.S., Bandbe S. G., Athawale R. B., at inter University Convention Avishkar 5/02/2012-13 to 7/02/2012-13 in the field of Medicine and Pharmacy in post graduate level conducted at Dhapoli, Ratnagiri.
- ✦ Vishwakarma Purvi, “Zonal level, Young pharmacists’ innovative project award” Research work entitled, “Bovine serum albumin gold nanoconjugates - Little bomb that promises big bang for cancer patients” Organized by Saraswathividyalbhavan’s college of pharmacy, Dombivli, held on: January 30, 2013. The above research topic was guided by Athawale R.B.
- ✦ The Project entitled,” Folic Acid Anchored nanocarriers for Targeting to Brain tumor is shortlisted for Presentation at Anveshen for national level presentation. Anveshan 2013- National Student Research Convention competition in pursuit of innovation amongst research student organized by Association of Indian Universities (AIU), hosted by TISS was held between 20-22 march' 2013. Ms. Darshana S. Jain, Dr. Rajani Athawale received second prize (merit certificate, memento with a cheque amounting Rs. 20,000) for the research work entitled " Folic Acid anchored PLA nanoparticles for targeting of Brain Tumors"
- ✦ Research Work on “Lipid based nano-carriers of Etoposide for lung targeting” oral presentation in the 1st International Conference on ‘Contemporary issues and future challenges in Drug Development’ South Asian Chapter of ACCP held on 5-7th Oct., 2007 won the 3rd prize.

TRAINING PROGRAMME

✚ Attended Training Program in Chromatographic Techniques

FACULTY DEVELOPMENT PROGRAMME

Organization/Institute	Title of the course	Duration
Victoriya Jubilee Technical Institute, Matunga, Mumbai	Modern Computer oriented Techniques in Education	6/5/1996 - 5/6/1996 (4 weeks)
Veermata Jijabai Technological Institute, Matunga, Mumbai	Advanced Principles of management	21/6/1999 - 16/7/1999 (4 weeks)
Poona college of Pharmacy, Erandwane, Pune	Advances in Pharmaceutical Sciences	17/6/2002 - 6/7/2002 (3 weeks)
Quality Improvement Programme. University College of Pharmaceutical Scienceskakatiya University, Varangal (A.P.)	Advances in Industrial Pharmacy and Pharmaceuticals	3/9/2003 - 16/9/2003 (2 weeks)

PROFESSIONAL MEMBERSHIP

1. Member, IPA, Life Member, APTI.
2. Member, Controlled Release Society & Indian Cancer association, ISTE
3. Evaluator of Research papers for the following Journals: Indian Drugs, Journal of Biomaterials

ACADEMIC RESPONSIBILITIES:

4. IQAC Member
5. Program Committee Member
6. RAC Member
7. Grievance Redressal Committee Member
8. IIC & ARIA Coordinator
9. AISHE Coordinator
10. Cultural Activity
11. Internship
12. Seminar Coordinator
13. Minorities and Category Committee

OUTREACH ACTIVITY : Blood Donation Camp, Supporting weaker students
