

Dr. RAHUL SHUKLA

Assistant Professor,
Department of Pharmaceutics,
NIPER Raebareli.

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Research Interest: Pharmaceutics, Nanomedicine, Particle Engineering, Bionanomaterials, Polymeric nanoparticles, nanocrystals, for various therapeutic applications

Academic Achievements/Awards/Experiences:

- Got selected for **SERB International Research Experience (SIRE)** Fellow for the year, 2022-2023 for 4 months fellowship at School of Pharmacy and Biomedical Sciences, University of Central Lancashire, United Kingdom.
- Got **D.S Kothari Post-Doctoral Fellowship in Medical Sciences** in UIPS, Panjab University
- Got CSIR-GATE fellowship, during PhD from CSIR-Central Drug Research Institute, Lucknow. Qualified Graduate Aptitude Test in Engineering (GATE-2006) in Pharmaceutical Sciences, conducted by I.I.T Kharagpur, with an **All-India Rank-6** with **99.96 percentile**.
- Got DST & CICS travel Grant to present paper Paper Title “A Lymphotropic Delivery System for Antifilarial Drug: Diethylcarbamazine Citrate held at **Amsterdam, Netherland** 15-17 July 2012.
- Got CICS travel Grant -Invited talk on “Doxycycline loaded nanoparticles of PLGA for controlled delivery and effective therapy against lymphatic filariasis”, held at ISNSC 2016, **Brisbane, Australia**.
- worked in Formulation Research & Development at Dr Reddy’s’ Lab Ltd, Hyderabad.

Education:

COURSE	UNIVERSITY
Ph. D	J.N.U, New Delhi, CSIR-CDRI, Lucknow
M. Pharm. (Pharmaceutics)	IIT, (BHU), Varanasi
B. Pharm.	Jamia Hamdard, New Delhi

Publications in Refereed International Journals:

- 1) Clofazimine nanoclusters show high efficacy in experimental TB with amelioration in paradoxical lung inflammation, *Biomaterials Advances*, 2023, (**I F: 8.0**).
- 2) Simultaneous Intranasal Codelivery of Donepezil and Memantine in nano-colloidal Carrier: Optimization Pharmacokinetics and Pharmacodynamics studies, Mayank Handa, S. Sanap, R S Bhatta, Gajanan Patil, Rajendra Palkhade, D P Singh, Rahul Shukla*, *Molecular Pharmaceutics*, ACS, 2023, (**I F: 4.9**).
- 3) Nanovesicular-mediated intranasal drug therapy for neurodegenerative disease, Shalu Singh, Rahul Shukla *AAPS PharmSciTech*, 2023, (**I F: 3.3**).

- 4) Vincristine based Nanoformulations: A Preclinical and Clinical Studies Overview, Rahul Shukla*, Ajit Singh and Kamalinder K. Singh*, Drug Delivery and Translational Research,2023, (**I F: 5.4**).
- 5) Vitamin E Modified Polyamidoamine Dendrimer for Piperine Delivery to Alleviate A β 1–42 Induced Neurotoxicity in Balb/c Mice Model, A Singh, D Rakshit, A Kumar, A Mishra, **R. Shukla***, Journal of Biomaterials Science, Polymer Edition, 1-18,2023, (**I F: 3.68**).
- 6) Hyaluronic acid-functionalized lipoplexes and polyplexes as emerging nanocarriers for receptor-targeted cancer therapy, J. Chandra, N. Molugulu, S. Annadurai, S. Wahab, R. Karwasra, S. Singh, **R. Shukla**, P. Kesharwani, Environmental Research,2023, (**I F: 8.43**)
- 7) Therapeutic potential of Microneedles based delivery systems for the management of Atopic dermatitis, Shalini Shukla, Kalpana Balu Mamale, R K Kaundal and Rahul Shukla, Journal of Drug Delivery Science and Technology,2023, (**I F: 5.06**)
- 8) New Generation smart drug delivery systems for Rheumatoid arthritis, Current Pharmaceutical Design, Raghuraj Singh, K. Jadhav, K. Vaghasiya, E. Ray, Rahul Shukla and R. K.Verma, 2023 (**I.F=3.33**)
- 9) Transferrin decorated PLGA encumbered Moxifloxacin nanoparticles and in vitro cellular studies, Gayathri Reddy A., M. Handa, D.Garabadu, R. Kumar, P. K. Kushawaha, **Rahul Shukla*** , Drug Development and Industrial Pharmacy,2023, (**Impact Factor: 3.72**)
- 10) Harnessing the personalized tailored medicines to digital-based data enriched edible pharmaceuticals, M.Handa, R. K. Kaundal, R. K. Verma, M. Rahman, **R. Shukla***, S. Beg* , Drug Discovery Today ,2023, (**Impact Factor: 8.369**)
- 11) The microbiome-gut-brain axis in Epilepsy: Pharmacotherapeutic target from bench evidence for potential bedside applications, Kundu S, Nayak S, Rakshit D, Singh T, **Shukla R**, Khatri DK, Awanish Mishra, European Journal of Neurology,2023, (**Impact Factor: 6.28**)
- 12) New insights on mode of action of vasorelaxant activity of simvastatin, K. Verma, **Rahul Shukla**, J. Dwivedi, S. Paliwal & S. Sharma, Inflammopharmacology,2023. (**Impact Factor: 5.01**)
- 13) Nanotheranostic: The futuristic therapy for copper mediated neurological sequelae, A Mhaske, S Sharma, **Rahul Shukla***, Journal of Drug Delivery Science and Technology,2023, (**Impact Factor: 5.1**)
- 14) Cedrus deodara (Roxb. ex D. Don) G. Don bark fraction ameliorates metabolic, endocrine, and ovarian dynamics in rats experiencing polycystic ovarian syndrome, A Bisht, R Gururani, S Jain, **Rahul Shukla**, J Dwivedi, S Sharma, Journal of Ethnopharmacology,2023, (**Impact Factor: 5.19**)
- 15) Recent nanoengineered diagnostic and therapeutic advancements in management of Sepsis, Mukesh Soni, Mayank Handa, Kamalinder K*. Singh, **Rahul Shukla***, Journal of Controlled Release, 2022, (**Impact Factor: 11.46**)
- 16) Recent pharmaceutical engineered approaches as prophylaxis and management of frostbite, Parth Patel, M. Handa, K. Jain, **Rahul Shukla***, Journal of Drug Delivery Science and Technology, 2022, (**Impact Factor: 5.1**)
- 17) Fabrication of TPGS-Grafted Polyamidoamine Dendrimer for Enhanced Piperine Brain Delivery and Pharmacokinetics, Ajit Singh, Akshada Mhaske, **Rahul Shukla***, AAPS PharmSciTech, 2022, (**Impact Factor: 4.02**)
- 18) Bilayer fixed-dose combination tablet for curcumin microparticles and piroxicam and in vitro evaluation, M Handa K Kumar, D Garabadu, P K Kushawaha & **Rahul Shukla***, Therapeutic Delivery,2023

- 19) Recent pharmaceutical engineered trends as theranostics for Japanese Encephalitis, Process Biochemistry, A. Mhaske, S. Singh, P. Kesharwani, **Rahul Shukla***, 2022, **Impact Factor: 4.88**)
- 20) Immunoliposomes as an emerging nanocarrier for breast cancer therapy, N Parveen, M AS Abourehab, **Rahul Shukla**, PV Thanikachalam, G K Jain, P. Kesharwani, European Polymer Journal, 2022, **(Impact Factor: 5.54)**
- 21) Recent advances in multifunctional dendrimer-based nanoprobe for breast cancer theranostics, P. Kesharwani, R. Chadar, **Rahul Shukla**, G. K. Jain, G. Aggarwal, M A S Abourehab, A. Sahebkar, Journal of Biomaterials Science, Polymer Edition, 2022, **(Impact Factor: 3.68)**
- 22) Retinoid Nanoparticulates: Approachable Gateway for Acne Treatment, Judy Lalrengpuii, K. Raza, Awanish Mishra, **Rahul Shukla***, Health Sciences Review, 2022.
- 23) Lymphatic targeting for therapeutic application using nanoparticulate systems, Nidhi Singh, M. Handa, V. Singh, P. Kesharwani, **Rahul Shukla***, Journal of Drug Targeting, 2022, **(Impact Factor: 5.1)**
- 24) Active pharmaceutical ingredients (API) into Ionic liquids: An effective approach for API, M. Handa, **Rahul Shukla***, H. Almalki, W., Alghamdi, S., Alharbi, K. S., **Rahul Shukla***, & Beg*, S., Drug Discovery Today, 2022, **(Impact Factor: 8.369)**
- 25) Wearable Smart devices in cancer diagnosis and remote clinical trial monitoring, Mayank Handa, S. Beg, M. Rahman, **Rahul Shukla***, W.H. Almaki, O. Afzal, A. S A Altamimi, Drug Discovery Today, 2022, **(Impact Factor: 8.369)**
- 26) Recent advances in nanocrystals heralding greater potential in targeted brain delivery, S. Mule, P. Khairnar, **Rahul Shukla***, Particle Systems Characterization, 2022. **(Impact Factor: 3.46)**
- 27) Rosemary oil low energy nanoemulsion: Optimization, μ rheology, in silico, in vitro and Ex vivo characterization, N Vasdev, M Handa, P Kesharwani, **Rahul Shukla***, Journal of Biomaterials Science Polymer Edition, 2022, **(I Factor: 3.68)**
- 28) Potential of particle size ≤ 15 nm for drug transportation to brain through olfactory region when delivered via nasal route, Mayank Handa, Ajit Singh, P. Kesharwani, **Rahul Shukla***, Health Sciences Review, 2022
- 29) Formulation and development TPGS nanoengineered polyamidoamine dendrimer for treatment of neurodegenerative disease, Ajit Singh, R.R. Ujjwal, S. Naqvi, S. Tiwari, P. Kesharwani, **Rahul Shukla***, Journal of Drug Targeting, 2022, **(I F: 5.1)**
- 30) Silymarin Encapsulated Xanthan Gum Stabilized Selenium Nanocarriers for Enhanced Activity against Amyloid Fibrils Cytotoxicity, V Saini, A Singh, **Rahul Shukla***, K. Jain, A K Yadav, AAPS PharmSciTech, 2022, **(Impact Factor: 4.02)**
- 31) Recent trends of natural based therapeutics for mitochondria targeting in Alzheimer's disease, Ashish Dhiman, M. Handa, M. Ruwali, P Kesharwani, **Rahul Shukla***, Mitochondrion, 2022, **(Impact Factor: 4.53)**
- 32) Recent advances in lipid-engineered multifunctional nanophytomedicines for cancer targeting, Mayank Handa, Sarwar Beg, **Rahul Shukla***, Md Abul Barkat, Hani Choudhry, Kamalinder Singh, Journal of Controlled Release, Volume 340, 10, Pages 48-59., 2021, **(Impact Factor: 11.46)**
- 33) Stimuli-responsive Polymeric nanosystems for therapeutic applications, M. Handa, A Singh, SJS Flora, **Rahul Shukla***, Current Pharmaceutical Design, 2022, **(I F: 3.3)**
- 34) Recent advances in nanotechnology based combination drug therapy for skin cancer, Shweta Kumari, P K Choudhary, **Rahul Shukla**, P. Kesharwani, Journal of Biomaterials Science Polymer Edition, 2022, **(Impact Factor: 3.75)**

- 35) Stimuli-Responsive Microneedles as a Transdermal Drug Delivery System: A Demand-Supply Strategy, B.H. Jaswanth Gowda, M G. Ahmed, Amirhossein Sahebkar, **Rahul Shukla**, P. Kesharwani, *Biomacromolecules*,2022, (**Impact Factor: 6.978**)
- 36) Biocompatible Nanomaterials for burns, Mayank Handa, S K Maharana, Kamlesh Pal, **Rahul Shukla***, *Current Pharmaceutical Biotechnology*, 2022, (**Impact Factor- 2.82**)
- 37) Nanocrystals an approachable delivery system for anticancer therapeutics, Pooja Khairnar, M Handa, **Rahul Shukla***, *Current Drug Metabolism*, (**I Factor- 3.40**)
- 38) Box Behnken Design Optimized Silibinin loaded Nanoliquid crystal for brain targeting, Ajit Singh, A. Vaish, **Rahul Shukla***, *Chemistry and Physics of Lipids*,2022, (**Impact Factor: 3.57**)
- 39) Graphene quantum dots: Synthesis, optical properties and navigational applications against cancer, Vrushti Kansara, **Rahul Shukla**, SJS Flora, Sanjay Tiwari, *Materials Today Communications*, 2022, (**Impact Factor: 3.66**)
- 40) Recent highlights on Omicron as a new SARS-COVID-19 variant: Evolution, genetic mutation and future perspectives, P Khairnar, Mukesh Soni, M. Handa, P. Kesharwani, **Rahul Shukla***, *Journal of Drug Targeting*, 2022, (**Impact Factor: 5.1**)
- 41) Formulation and Optimization of Silymarin Encapsulated Binary Micelles for Enhanced Amyloid Disaggregation Activity, A. Singh, R R Ujjwal, Rahul K Verma, **Rahul Shukla***, *Drug Development and Industrial Pharmacy*, 2022, (**I F: 3.72**)
- 42) Therapeutic potential of nanoemulsions as feasible wagons for targeting Alzheimer's disease, Handa, M., Tiwari, S., Yadav, A. K., H. Almalki, W., Alghamdi, S., Alharbi, K. S., **Rahul Shukla ***, & S. Beg*, *Drug Discovery Today*,2021, (**I F: 8.369**)
- 43) Nanotechnological approaches for targeting amyloid β aggregation with potential for Neurodegenerative disease therapy and diagnosis,*Drug Discovery Today*,2021, (**Impact Factor: 8.369**)
- 44) Potential of nanoparticulate based delivery systems for effective management of alopecia. Mishra, P., Handa, M., Ujjwal, R. R., Singh, V., Kesharwani, P., & **Shukla, R***, *Colloids and Surfaces B: Biointerfaces*, 208, 112050,2021, (**I F: 5.99**)
- 45) Investigations on the role of edge activator upon structural transitions in Span vesicles, Rathod, S., Arya, S., **Shukla, R.**, Ray, D., Aswal, V. K., Bahadur, P., & Tiwari, S., *Colloids and Surfaces A*,2021, (**Impact Factor: 5.5**)
- 46) Mobility of doxorubicin in TPGS micelles in response to sodium taurodeoxycholate incorporation: Analyses based on scattering and fluorescence studies, Jayant Sarolia, **Rahul Shukla**, Debes Ray, V K. Aswal, S. D. Choudhury,Pratap Bahadur Sanjay Tiwari, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*,2021, (**Impact Factor: 5.5**)
- 47) Drug Repurposing strategies and key challenges for Covid-19 management, Shubham Mule1, Ajit Singh, Khaled Greish, Amirhossein Sahebkar, P. Kesharwani*, **Rahul Shukla***, *Journal of Drug Targeting*,2021, (**Impact Factor: 5.1**)
- 48) Stimuli-responsive Polymeric nanosystems for therapeutic applications, Mayank Handa, Ajit Singh, Ajit Singh, S.J.S. Flora, Rahul Shukla*, *Current Pharmaceutical Design*,2021, (**Impact Factor: 3.33**)
- 49) Epidemiology, virology and clinical aspects of hantavirus infections:an overview, Sima Singh, Arshid Numan, D. Sharma, **Rahul Shukla**, A. Alexander, Gaurav K. Jain, Farhan J. Ahmad and Prashant Kesharwani, *International Journal of Environmental Health Research*,2021, (**Impact Factor: 4.5**)
- 50) PAMAM dendrimer as a talented multifunctional biomimetic nanocarrier for cancer diagnosis and therapy, Bhavya Surekha, Naga Sreenu Kommana, Sunil Kumar

- Dubey, A V Pavan Kumar, **Rahul Shukla**, P. Kesharwani, Colloids and Surfaces B,2021, (**Impact Factor: 5.99**)
- 51) Nanotherapeutics approaches for targeting alpha synuclien protein in the management of Parkinson disease, Singh, A., Maharana, S. K., **Shukla, R***, & Kesharwani, P., Process Biochemistry, 110, 181–194,2021, (**Impact Factor: 4.88**)
 - 52) Nanocarrier mediated autophagy an emerging trend for cancer therapy, Singh, A., Handa, M., Ruwali, M., Flora, S.J.S, **Shukla*, R.**, & Kesharwani*, P., Process Biochemistry,2021, (**Impact Factor: 4.88**)
 - 53) Quantum dot: Heralding a brighter future in neurodegenerative disorders, Singh, A., Mallika, T. N., Gorain, B., Yadav, A. K., Tiwari, S., S.J.S.Flora, **Shukla*, R.**, & Kesharwani*, P., Journal of Drug Delivery Science and Technology,2021, (**I.F:5.06**)
 - 54) Viral vectors as a promising nanotherapeutic approach against neurodegenerative disorders., Srivastava, V., Singh, A., Jain, G. K., Ahmad, F. J., **Shukla, R***, & Kesharwani, P. , Process Biochemistry,2021, (**Impact Factor: 4.88**)
 - 55) Optimization of Surfactant and Co-Surfactant Aided Pine Oil Nanoemulsion by Isothermal Low-Energy Methods for Anticholinesterase Activity, Handa, M.,Ujjwal, R. R.,Vasdev, N., Flora, S.J.S., and **Shukla, R***. ACS Omega, 6, 1, 559–568, 2021, (**Impact Factor: 4.1**)
 - 56) Box-Benken Design Optimized TPGS Coated Bovine Serum Albumin Nanoparticles Loaded with Anastrozole, Kumar, A., Singh, A., Flora, S.J.S., **Shukla, R***. Current Drug Delivery, 2020. (**Impact Factor: 3.75**)
 - 57) Nanodiamonds: A Versatile Drug Delivery System in Recent Therapeutics Scenario, Yadav, A. K., **Shukla, R.**, Flora, S.J.S.,Critical Reviews™ in Therapeutic Drug Carrier Systems, (2020). (**Impact Factor: 3.09**)
 - 58) Formulation and evaluation of gastro-retentive floating bilayer tablet for the treatment of hypertension, BalajiMaddiboyina, M. Hanumanaik, R. Krishna N.Vikas Jhawat,Pinki Rawat, Aftab Alam,Ahmed I.Foudahd Majed M.Alrobaian,**Rahul Shukla**,S Singh,P.Kesharwani,Heliyon, Volume 6, Issue 11, November 2020, (**Impact Factor: 3.77**)
 - 59) Investigations of process parameters during dissolution studies of drug loaded 3D printed tablets, Part H: Journal of Engineering in Medicine,2021,
 - 60) 3D Printing Fabrication of Personalized Nanomedicine, Keerti Jain, **Rahul Shukla**, Awesh Yadav, R.R. Ujjwal and S.J.S. Flora, Nanomaterials,2021, (**Impact Factor: 5.7**)
 - 61) Silymarin Encapsulated Nanoliquid Crystals for Enhanced Activity against Beta Amyloid Induced Cytotoxicity, Ajit Singh, Ashish Kumar, Rahul Verma, **Rahul Shukla***, International Journal of Biological Macromolecules, Volume 149, 1198-1206, 2020. (**Impact Factor: 8.02**)
 - 62) Immune checkpoint inhibitors: a promising anticancer therapy, Sima Singh, Daniel Hassan, Hibah M. Aldawsari, N. Molugulu, **Rahul Shukla**, P.Kesharwani,Drug Discovery Today, Volume 25, Issue 1, 2020, Pages 223-229, (**Impact Factor: 8.369**)
 - 63) Autophagy inducing inhalable Co-crystal formulation of Niclosamide-Nicotinamide for lung cancer therapy, Eupa Ray,K. Vaghasiya,A. Sharma,**Rahul Shukla**,Anil Kumar,Rahul K Verma, AAPS PharmSciTech (2020),(**I.Factor:4.02**)
 - 64) Role of flavonoids in neurodegenerative diseases: Limitations and future perspectives, Gagandeep Mann, Biplob Sikdar, Ashish Kumar, **Rahul Shukla**, Awanish Mishra,Current Topics in Medicinal Chemistry,2020, ,(I.Factor:3.57)
 - 65) Insulin mediated novel therapies for the treatment of Alzheimer's disease,S K Dubey, K.K.Lakshmi, K V Krishna, Mukta Agrawal, Gautam Singhvi,R N Saha, Swarnlata

- Saraf, Shailendra Saraf, **Rahul Shukla**, ,A Alexander, Life Sciences,2020, **(I.Factor:6.75)**
- 66) Recent advances in self-assembled nanoparticles for drug delivery, T Varma Lanke,N. Singh,B. Gorain,H Gorain,Murtaza Tambuwala,P. Kesharwani,**Rahul Shukla***, Current Drug Delivery,2020, **(Impact Factor: 3.75)**
 - 67) Azacitidine loaded PLGA nanoparticles and its dual release mechanism, Kanchan Kashyap,Mayank Handa, Rahul Shukla*, Current Nanomedicine , 2020.
 - 68) Drug delivery and targeting to the brain through nasal route: Mechanisms, Applications and Challenges, Kanchan Kashyap, **Rahul Shukla***, Current Drug Delivery, Volume 16, Number 10, 2019, 887-901,2019, **(Impact Factor: 3.75)**
 - 69) Temperature/pH-Triggered PNIPAM-Based Smart Nanogel System Loaded With Anastrozole Delivery for Application in Cancer Chemotherapy". Ajit Singh, Kalpesh Vaishagya, Rahul K. Verma, **Rahul Shukla***; AAPS PharmSciTech (2019) 20: 213. **(I.F=4.02)**
 - 70) Polycaprolactone based nano-carrier for co-administration of moxifloxacin and rutin and its in-vitro evaluation for sepsis,M. Handa, A.Sharma, Rahul K. Verma, **Rahul Shukla*** , Journal of Drug Delivery Science and Technology,2019. **(I.F=5.06)**
 - 71) Key Signaling Pathways Engaged in Cancer Management :Current Update, Sanjiv Singh and **Rahul Shukla**, Current Cancer Therapy Reviews, 2020, 16, 36-48.
 - 72) Nanocrystals: An Overview of Fabrication, Characterization and Therapeutic Applications in Drug Delivery, Vishwas P. Pardhi, Tejesh Verma, S.J.S. Flora, H. Chandasana, **Rahul Shukla***, Current Pharmaceutical Design, Volume 24 , Issue 43 , 2018.**(I.F=3.33)**
 - 73) Caffeic acid phenethyl ester (CAPE) reverses fibrosis caused by chronic colon inflammation in murine model of colitis.,MM Tambuwala, P Kesharwani, **R Shukla**, PD Thompson, PA McCarron, Pathology-Research and Practice, Vol. 214, Issue 11, Pages 1909-1911 2018, **(I. F: 3.3)**
 - 74) Quality by Design (QbD)-enabled development of aceclofenac loaded-nano structured lipid carriers (NLCs): An improved dermatokinetic profile for inflammatory disorder(s). N. K. Garg, G. Sharma,B. Singh, P.Nirbhavane, R. K. Tyagi, **Rahul Shukla**, O.P. Katare, Int. Jou. of Pharmaceutics, 517 (2017) 413–431 **(I. F: 6.51)**
 - 75) Chitosan coated alginate micro particles for oral delivery of antifilarial drug and combinations for intervention in Brugia malayi induced lymphatic filariasis. **R.Shukla**, J.Gupta et al., RSC Advances 2015, 5, 69047–69056.**(Impact factor 4.03)**
 - 76) Emerging trend in nano-engineered polyelectrolyte based surrogate carriers for delivery of bioactives. Shukla P, Gupta G, Singhodia D, Shukla R, et al. Expert opin Drug Deliv. 2010 Sep; 7(9):993-1011. **(Impact factor 8.12)**
 - 77) Ciprofloxacin surf-plexes in sub-micron emulsions: A novel approach to improve payload efficiency and antimicrobial efficacy, V. Jain, D Singodia, G K. Gupta, D Garg, G.B.S Keshava, **Rahul Shukla**, P. K. Shukla, and P R. Mishra, International Journal of Pharmaceutics,Vol. 409 (2011) 237–244 **(I. Factor: 6.5)**
 - 78) Development of Nevirapine Loaded Novel Surfactant Free Polymeric Emulsion and Investigations for Its Suitability as Drug Delivery Vehicle. D Singodia, S Kansal, A Verma, **Rahul Shukla**, P Shukla,P Dwivedi, V Kumar, P Gupta, A. K. Dwivedi, and P R. Mishra.Journal of Bionanoscience Vol.4, 66-73 (2010)
 - 79) Exploiting 4-sulphate N-acetyl galactosamine decorated gelatin nanoparticles for effective targeting to professional phagocytes in vitro and in vivo. P. Dwivedi, S. Kansal, M.Sharma, **Rahul Shukla**, A. Verma, P. Shukla, P. Tripathi, P. Gupta, D. Saini, K. Khandelwal,R. Verma, A. K. Dwivedi and P. R. Mishra

- Journal of Drug Targeting, 2012 Oct 1, (**Impact Factor 5.1**)
- 80) Microparticles of Diethylcarbamazine Citrate for the Treatment of Lymphatic Filariasis. **Rahul Shukla***, J. Kumar, P. Dwivedi, P. Gatla and P.R. Mishra Asian Journal of Chemistry; Vol. 25, (2013), 302-304.
 - 81) Preparation and characterization of solid lipid nanoparticles of antimalarial drug Arteether for oral administration. P. Dwivedi, R. Khatik, K. Khandelwal, **Rahul Shukla**, S. K Paliwal, A. K Dwivedi, P R Mishra, Journal of Biomaterials and Tissue Engineering, Vol. 4, 1–5, 2014
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Patent & Copyrights :

1. Combinatorial Formulation for Solubilization of Poorly Water-Soluble Drugs & Method of Preparation Thereof. Dr. Rahul Shukla, Mr. Mayank Handa, Dr. S.J.S. Flora, Indian Patent No: 201911046999.
2. Pharmaceutical Compositions Of Montelukast For Enhancing Oral Bioavailability And Method Of Preparation Thereof, Dr. Rahul Shukla, Mr. Mayank Handa, Mr Nikhil Chauhan, Dr. S.J.S. Flora, Patent No: 201911042226.
3. Novel Composition of Zein Polymeric Nanoparticles and Method Of Preparation Thereof, Dr. Rahul Shukla, Mr. Mayank Handa, Mr Ajit Singh, Mr Abhas Saxena, Dr. S.J.S. Flora, Indian Patent No: 202011024072.
4. Coating Composition having Pathogen Deactivation Properties for 3-Ply Surgical-Mask and Method of Preparation Thereof, Dr. Rahul Shukla, Dr Anoop Kumar, Dr. A K Yadav, Dr. S.J.S. Flora, Indian Patent No: 202011033702
5. Natural Oil Based Herbal Sanitizer Hydrogel Composition and Method of Preparation Thereof, Dr. A K Yadav, Dr. Rahul Shukla, Dr Saba Naqvi, Dr. S.J.S. Flora, Indian Patent No: 202011033482
6. Novel Non-Aqueous Topical Anti-Inflammatory Drug Composition and Method of Preparation Thereof Dr Rahul Shukla, Gagandeep, Mayank Handa, Dr Awanish Mishra, Dr S.J.S. Flora, Indian Patent No: 202111007442.
7. Novel Method of Preparation for Metallic nanoparticles and Product Thereof, Dr. Rewati Raman Ujjwal, Mr. Mayank Handa, Dr. Rahul Shukla, Dr. S.J.S. Flora, Indian Patent No: 202111009794.
8. Novel method for preparation of Vincristine loaded exosomes and their therapeutic Intervention Thereof Miss Reetika Tandon, Mr. Mayank Handa, Dr. Rahul Shukla, Dr. Nidhi Srivastava, Indian Patent No: 202211065328.
9. An Artemisinin Loaded Self Emulsifying Delivery Composition, Mr. Harsh, Dr. Pratima Tripathi, Dr. Rahul Shukla, Dr. Sandeep Chaudhary, Indian Patent No: 202311049238
1. **Copyright granted:** PharmSolWave Technology, Dr. Rahul Shukla, Mr. Mayank Handa, Dr. S.J.S. Flora, Diary No. 18327/2019-CO/L.

Project Awarded :

- Got selected for SERB International Research Experience for the year, 2022-2023 for 4 months fellowship at School of Pharmacy and Biomedical Sciences, **University of Central Lancashire, United Kingdom.**
- Got Awarded DST Science and Engineering Research Board (SERB) - Startup Research Grant (SRG) LRP engineered nanolipidic carriers as potential therapeutics for brain targeting in Wilson's disease, File Number: SRG/2022/001285, 2 Years, 29.49 Lacs

Editor in Books:

1. **IntechOpen – Title “Role of Novel Drug Delivery Vehicles in Nanobiomedicine”, Edited by Rajeev K. Tyagi, Neeraj K Garg, Rahul Shukla, Prakash Singh Bishen**
2. **Elsevier: Nanomedical Drug Delivery for Neurodegenerative Disease, Edited by A K Yadav, Rahul Shukla and S.J.S. Flora**
3. **Elsevier: Multifunctional Nanocomposites for Targeted Drug Delivery in Cancer Therapy, Edited by A.K. Yadav, Rahul Shukla and Rewati R.Ujjwal**
4. **Elsevier: Cannabis and Its Derivatives: Guide to Medical Application and Regulatory Challenges**
5. **Elsevier: Infectious diseases: innovations applying nanoarchitectures,**
6. **Ereadon: Pharmaceutics-I, Edited by Rahul Shukla and Pankaj K. Singh**
7. **Drug Formulation Design, IntechOpen, Edited by Rahul Shukla Co-Editors: Akbar Ali and Aleksey Kuznetsov**
8. **Springer Nature- Neuroendocrine-Immune Axis: A New Revolution to Understand the Pathogenesis of neurodegeneration,**
9. **Springer Nature-Drug Repurposing: Witnessing the Rebirth of 21st-Century Therapeutics**

Chapter in Book Published by International Publishers :

1. “Chitosan-Based Nanocarriers A Promising Delivery System for Bioactives” Book Chapter published by, NanoAgroceuticals & NanoPhytoChemicals., **CRC Press, Taylor & Francis Group**
2. “Dendrimer-based nanocarriers in lung cancer therapy” Book “Nanotechnology-based Targeted Drug Delivery Systems for Lung Cancer” Chapter Published by **Elsevier.**
3. “Dendrimer-based nanoparticulate delivery system for cancer therapy” Book Chapter Published by **Elsevier, 2019.**
4. “Conclusion and future prospective of polymeric nanoparticles for cancer therapy” Book Chapter Published by **Elsevier, 2019.**

5. "History of Flavors associated with functional foods and Nutraceuticals": Flavor development for functional foods and nutraceuticals, Flavor development for functional foods and nutraceuticals, Book Published by **CRC Press 2019, taylor & francis group**.
6. "Flavors and Fragrances - Natural and Food Grade Ingredients for Nutraceuticals applications" Flavor development for functional foods and nutraceuticals, Book Published by **CRC Press 2019, taylor & francis group**.
7. "Natural flavors in functional food supplements" Flavor development for functional foods and nutraceuticals, Book Published by **CRC Press 2019, taylor & francis group**.
8. "Introduction to Pharmaceutical Product Development" Pharmaceutical Product and Process Optimization Book Published by **Apple Academic Press 2019**.
9. "Recent Advances in the Development of Nanopharmaceuticals" Pharmaceutical Product and Process Optimization book Published by **Apple Academic Press 2019**.
10. "Environmental risk factors, genetic variations and their interactions: Association with susceptibility to cancer" for book on "Environmental Microbiology and Biotechnology" to be published by **Springer Nature**, Singapore.
11. "Human Microbiome and Malignancy: Principles, Mechanisms and Challenges" Book Chapter for book on "Infectious Diseases and Microbes: Progress and Prospects" published by **Springer-Nature**.
12. "Application of membrane processing techniques in wastewater treatment for food industries", for book on Applications of Membrane Technology for Food Processing Industries" going to be Published by **CRC Press**.
13. "Retention of antioxidants by using novel membrane processing technique", for book on Applications of Membrane Technology for Food Processing Industries Published by **CRC Press**.
14. "Probiotic supplementation in major depressive disorders" for book on Volume 4: Successes, problems and future prospects of probiotics in neurodegenerative disorders, published by **Springer Nature**.
15. "Role of Probiotics in Rheumatoid Arthritis" for book on Volume 5: Probiotics in Cancers and immunology of Multivolume Book series entitled "Probiotic Research in Therapeutics" going to be published by **Springer Nature**.
16. "Dendrimer-based drug delivery systems for tuberculosis treatment" Nanotechnology Based Approaches for Tuberculosis Treatment Published by **Elsevier**.
17. "Electrospun nanofibers for wound healing", in book "Theory and Applications of Nonparenteral Nanomedicines, Published by **Elsevier**.
18. "Nanomedicine in pain management", in book "Theory and Applications of Nonparenteral Nanomedicines", Published by **Elsevier**.
19. "Emergence of Nanophytomedicine in Health Care Setting", in Book Nanophytomedicine, published by **Springer Nature**.
20. "Nanophytomedicine Market: Global Opportunity Analysis and Industry Forecast" in Book Nanophytomedicine, published by Springer Nature.
21. "Nanotechnological Advances in Direct Nose to Brain Drug Delivery for Neurodegenerative Disorders and other Neuro-ailments", in Book on Direct Nose to Brain Drug Delivery Published by **Elsevier**.
22. "Immunochemotherapy combination therapy in cancer treatment", to be published by **Springer Nature**, Singapore.

23. "Clinical Translation Status of Nanoformulations", to be published by **Springer Nature**, Singapore.
24. "Role of nanomedicines in neglected tropical diseases", to be published by **Wiley**.
25. Oxidative Stress and Cancer: Role of the Nrf2-Antioxidant Response Element Signaling Pathway published by **Springer Nature**, Singapore.
26. Nano Drug Delivery Approaches for Lymphatic Filariasis Therapeutics, to be published by **Springer Nature**
27. Futuristic Potential of Nanoantibiotics Against Multidrug Resistant Tuberculosis, to be published by **Springer Nature**
28. Nanotechnology-mediated combinational drug delivery approach for cancer therapy Published by **Elsevier**
29. Application of nanotechnology assisted devices in cancer treatment Published by **Elsevier**
30. Chitosan as a biomaterial for implantable drug delivery Published by **Elsevier**
31. Chitosan for delivery of biomolecules Published by **Elsevier**
32. Nanomaterial-based drug delivery systems as tools for targeted therapy of neurodegenerative diseases Published by **Elsevier**
33. New Insights into Nanoparticulate Carriers for Direct Nose-to-Brain Drug Delivery, Nanoengineering of Biomaterials, 261-307, **Wiley**
34. Application of nanotechnology assisted devices in cancer treatment, Nanotherapeutics in Cancer Vaccination and Challenges, **Elsevier**
35. 3D Nano printing in the Biomedical Industries, Smart 3D Nano printing, **CRC Press**
36. Concept of Nanomedicine in Endocrine Hormone Cancer Treatment, **Springer**.
37. Regulatory Landscapes in Approval of Cancer Vaccines, **Springer Nature**.
38. Dendrimers in photodynamic therapy, **Elsevier**.
39. Preformulation Studies: A Versatile Tool in Formulation Design, **Intechopen**.
40. Nanoscaffolds and role of 3D-printed surgical dressings for wound healing application, **Elsevier**.
41. Hybrid Nanomaterials as Novel Therapeutic and Imaging Modalities, **Springer**
42. Polymeric Micelles in the Delivery of Therapeutic Phytoconstituents, **Springer**
43. Therapeutic Potential of Nanocrystals for Targeting Lymphoid Carcinoma, **Springer**

Invited Talks

- Title "Dual nanoengineered Sphingomyelin coated Vincristine nanocrystals for targeting cerebral carcinoma at Brain Tumor" by Brain Tumor Northwest England (BTNW) Annual Retreat, 15-16 Dec 2022 Marriott, United Kingdom.
- Title "Development and evaluation of Silibinin loaded Glyceryl monooleate Nano liquid crystalline for Alzheimer's therapy. Swansea University, United Kingdom 2022.
- Invited talk on "Doxycycline loaded nanoparticles of PLGA for controlled delivery and effective therapy against lymphatic filariasis", held at ISNSC 2016, Mercure Brisbane, Australia.
- Invited talk on Development and evaluation of Silibinin loaded Glyceryl monooleate Nano liquid crystalline for Alzheimer's therapy. Swansea University, UK on the 22-23rd of August 2022.
- Invited talk on "ISNSCON2018: 6th World Congress on Nanomedical Sciences" held at Vigyan Bhawan, New Delhi.

- Poly (lactic-co-glycolic acid) (PLGA) & Poly (caprolactone) (PCL) Nanoparticles for Sustained delivery of anti-filarial drug. (Oral Presentation) ASP-14, held at Indian Institute of Technology, Guwahati.
- Microparticles of Diethylcarbamazine Citrate for the Treatment of Lymphatic Filariasis. ICONN-2013 held at SRM University, Chennai. **(Oral Presentation)**
- **Invited talk on “Pharmaceutical Innovation & Product development of therapeutics” Lyotalk, Novotel, Hyderabad, Feb 23-24’2017.**
- Llyod’s Institute of Technology, Noida Webinar dated 19 May’2021
- Faculty of Pharmacy, Dharmsinh Desai University, Nadiad Webinar dated 21/8/2021
- BICON-2021 Indo Japan Fest Webinar dated 15 Dec’2021
- Invited Expert talk on “Pharmaceutical Nanocrystals Techniques”, **Delhi Pharmaceutical Sciences & Research University, New Delhi, India.**
- Invited Expert talk on “Drug development and delivery systems: Strategies, Challenges, and Opportunities”, Institute Pharmaceutical Sciences, Lucknow, India.
- Invited Expert talk on DST Stuti “Pharmaceutical Nanocrystals: heralding greater potential in Drug Delivery with versatile applications”, **Indian Veterinary Research Institute, Izatnagar, (U.P).**
- Faculty Development Program (FDP) Invited Expert talk on Drug nanocrystals: Promising approach in drug delivery, applications and challenges, SGT University, Haryana India
- Invited Eminent Lecture Series May 9-17, 2023, at RITM, Lucknow, U.P, India
- Invited Expert talk on Drug Discovery, Design & Development of Dosage Forms at National Conference held at KPSM Pharmacy college, Sitapur, U.P, India
- Invited talk in Professional Development Programme (PDP) on “Innovations, opportunities, and challenges in Life Science Sector Skilling & Research, 20 July 2023.

Workshop & National School Participated & Distance Learning Courses.

- Participated in QIP Short term course in Department of Material Sciences, IIT BHU Faculty Development Programs on “Nanomaterials Synthesis, characterizations & Applications”, 1-6 July 2019
- The Distance Learning General course on Intellectual Property from Feb 1-April 28, 2013 conducted by WIPO Academy completed.
- Participated in Nano Mission School on “Nano Science & Nano Technology- Biological Sciences” conducted by INST, Mohali from Nov 6th-11th, 2017.
- Participated in Workshop on Biorisk Management, hosted by Sandia National Lab, USA, 11th -15th Sep’2017.
- Participated in National Workshop on “Research Methodologies in Animal Sciences” Organized by Department of Zoology, Centre for Advanced Studies (UGC), Panjab University, Chandigarh from March 21st to 28th March, 2017.
- Participated in Symposium cum workshop on “Then Integration of Biological Methods in the Nano field of Chemistry” held at SAIF, Panjab University, Chandigarh, 3rd - 4th March’2017.
- Participated & Presented Paper in National School on Sustainable Polymers conducted by Dept. of Chemical Engineering, IIT, Guwahati from Jan 6-11 2014.
- Scientific and Technical Awareness Programme on Animal Experimentation, March 26-30, 2012 held at National Laboratory Animal Centre, Lucknow

Membership of Professional Bodies

- **Member British Society of Nanomedicine (BSNM)**
- **Life Member of Association of Pharmaceutical Teachers of India (APTI), India.**
- **Life Member of Indian Pharmacy Graduates Association (IPGA), NewDelhi**
- **Life Member of Indian Red Cross Society, New Delhi.**
- **Life Membership of Indian Academy of Neurosciences (IAN).**

Extra Curricular Activities

- ◆ Member of scientific, registration and reception committee of 59TH Indian Pharmaceutical Congress held at B.H.U.
- ◆ Got N.C.C 'B' Certificate.
- ◆ Participated in National Games-94, Pune.
- ◆ Life member of Youth hostels association of India.

RESEARCH STUDENTS SUPERVISED

M.S (Pharm): Completed -33 Ongoing:7

PhD: Submitted: 2 Ongoing:5

Post Doctoral: Completed -1 (N-PDF)

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