

**Dr. MUKTA AGRAWAL** (M. Pharm, Ph.D.)

**Assistant Professor**

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**Section Editor**

Pharmaceutical Sciences, **Heliyon, Cell Press**, Elsevier Inc.

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## PROFILE

- **Section Editor**, Pharmaceutical Sciences, **Heliyon (Impact Factor: 4.0)** by Cell Press, Elsevier Inc. Sep. 2024.
- **Associate Editor**, Pharmaceutical Sciences, Pharmacology and Toxicology, **Heliyon (Impact Factor: 4.0)** by Cell Press, Elsevier Inc. (2022-2024).
- **Assistant Professor**, Royal School of Pharmacy, The Assam Royal Global University, NH-37, opp. Tirupati Balaji Temple, Betkuchi, Guwahati, Assam.
- **Assistant Professor** in School of Pharmacy Technology and Management, SVKM's Narsee Monjee Institute of Management Studies (NMIMS), Hyderabad.
- **Chairperson, Institutional Research and Development Cell**, SVKM's Narsee Monjee Institute of Management Studies, Hyderabad.
- **Co-Ordinator, NAAC Criteria III**, SVKM's Narsee Monjee Institute of Management Studies, Hyderabad.
- **Top 2% Scientist for 3 consecutive years by Stanford University & Elsevier (2022-2024).**
- **10 Years of Teaching Experience as Assistant Professor**
- **Earlier, Assistant Professor** in Rungta College of Pharmaceutical Sciences and Research, Bilai, Chhattisgarh, India, since 16<sup>th</sup> September 2014 to 23<sup>rd</sup> September 2021.
- Expertise in Formulation and Development of Nanocarriers particularly Lipid based nanocarriers like **NLC, SLN, Liposome** etc. for Brain targeting (**Nose-to-Brain**) delivery
- **Reviewer, Biomedicine and Pharmacotherapy (IF: 7.5)**, International Journal of Pharmaceutics (IF: 5.0), Journal of Drug Delivery Sciences and Technology (IF: 5.8) SCI indexed Journals by Elsevier
- Expertise in testing and calibration of many analytical equipment like UV spectrophotometer, Infrared spectrophotometer, Zeta-sizer, Dissolution apparatus etc.
- Knowledge of various laboratory management operations like development and implementation of standard operating and quality assurance procedures.
- Communication skills, both oral and written technical language and knowledge of writing scientific Research and Review papers.
- Knowledge of documentation procedures related to National Board of Accreditation (**NBA**), National Assessment and Accreditation Council (**NAAC**) and Pharmacy Council of India (**PCI**).
- Actively participated in Institutional level inspections by **PCI, AICTE** and **CSVTU**.

**RESEARCH INTERESTS**

Nanoparticle, Stimuli responsive drug carrier, Brain targeting, Alzheimer therapy, Nose-to-brain drug delivery, Tumor targeting

**WORK EXPERIENCE****Overall experience: 10 years and 3 months**

10.02.2025-to Present	<b>Assistant Professor</b> , Royal School of Pharmacy, The Assam Royal Global University, Guwahati, Assam
27.09.2021-01.02.2025 <b>(3 years, 4 months &amp; 4 Days)</b>	<b>Assistant Professor</b> , SPTM, SVKM's Narsee Monjee Institute of Management Studies (NMIMS), Jadcherla, Mahbubnagar, Telangana
16.09.2014-23.09.2021 <b>(7 years and 7 days)</b>	<b>Assistant Professor</b> at Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud, Road, Bhilai, Chhattisgarh.

**ACADEMIC CREDENTIALS**

Year	Degree	Department/Institution/Location
2018-2022	Ph.D. (Pharmaceutics)	Chhattisgarh Swami Vivekanand Technical University (CSVTVU), Bhilai, Chhattisgarh Title: Development and Evaluation of Lipid Nanocarrier based <i>In situ</i> Gelling System for Nose-to-Brain Drug Delivery
2012-2014	M. Pharm (Pharmaceutics) (73.91%)	University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur, Chhattisgarh Title: Development and Characterization of Fluconazole Loaded Nanosponges for Ocular Drug Delivery.
2008-2012	B. Pharmacy (80.9%)	Rungta College of Pharmaceutical Sciences and Research, CSVTVU, Bhilai, Chhattisgarh Title: Formulation and Evaluation of a Cost-Effective Liquid Cream Based Shampoo.
2007	HSSC (84.4%)	CGBSE, Raipur
2005	SSC (85.0%)	CGBSE, Raipur

**AWARDS AND HONORS****Awards**

- **Best Oral Presentation in Pharmacon 2023**, an International Conference on 'New Horizon on Drug, Devices & Diagnostics', organized by National Institute of Pharmaceutical Education and Research, Hyderabad under Department of Pharmaceuticals, Ministry of Chemical and Fertilizers, Government of India, from 14-16 September 2023 for presenting research work entitled "Comparative Analysis of SLN and NLC as Novel Drug Carrier System"
- **First Prize (10,000 cash award)**, Central Zone Dissolution Research Presentation India

**(DRPI) 2021-Online** organized by Society of Pharmaceutical Dissolution Science (SPDS) in collaboration with American Association of Pharmaceutical Scientists (AAPS), held on 17 July 2021, for presenting research work under the title “Controlled and prolonged release of an herbal antioxidant (curcumin) from Nano-lipid carrier”.

- **First Prize (10,000 cash award), East-Central Zone Dissolution Research Presentation India** (DRPI) 2020-Online organized by Society of Pharmaceutical Dissolution Science (SPDS) in collaboration with Association of Pharmaceutical Teachers of India (APTI), held on 7th June 2020, for presenting research work under the title A Comparative Assessment of Dissolution Profile of Curcumin and Piperine from Nano-lipid carrier.
- **Best Oral Presentation Award** at CGCOST Sponsored National Seminar on “Current need of Patent and Publication in Research for Global Recognition” at Rungta College of Pharmaceutical Sciences and Research, Kohka-kurud road, Bhilai, Chhattisgarh, India from 9<sup>th</sup> to 10<sup>th</sup> March 2018, under the title ‘Nose-to-Brain drug delivery for the treatment of Alzheimer’s disease: Challenges and Progress towards patentability and clinical application.’
- Won the title of ‘**Young Scientist’ (21,000 cash award)** at 14<sup>th</sup> Chhattisgarh Young Scientists Congress, 2016, jointly organized by Chhattisgarh Council for Science and Technology (CGCOST) and Bilaspur University, Bilaspur Chhattisgarh, held during 28<sup>th</sup> to 29<sup>th</sup> February 2016.
- **Best Poster Presentation** Award in **Spirit’s 2012** under the auspices of The Pharmaceutical Society, Department of Pharmaceutics, IT-BHU, Varanasi on 25<sup>th</sup> to 26<sup>th</sup> February 2012.

### **Recognition**

- Recognized and listed in the list of “Top 2% Scientists” in the world in year 2024 by Stanford University duly published by Elsevier. 17 Sep 2024.  
<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/7>
- Featured in featured in the list of “Top 2% Scientists” in the world in year 2023 by Stanford University in collaboration with Elsevier. 4 Oct 2023.  
<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/6>
- Recognized as Top 3 % of Experts working in novel dosage form development worldwide by AD Scientific index. 2023.  
<https://expertscape.com/au/alzheimer+disease/Agrawal%2C+Mukta>
- Featured in featured in the list of “Top 2% Scientists” in the world in year 2022 by Stanford University in collaboration with Elsevier. 10.Oct 2022.  
<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/4>
- Recognized as Top ranked scientist of Experts working in Alzheimer’s Disease worldwide by Expertscape. 2022 and 2023.  
<https://expertscape.com/au/alzheimer+disease/Agrawal%2C+Mukta>

### **Academic appreciations/ research incentives**

- Certificate of Appreciation for Research Publications and Securing position in Top 2% Scientist of the World for year 2023-24 by SPP School of Pharmacy and Technology management, SVKM’s Narsee Monjee Institute of Management Studies, Hyderabad in

2024.

- Certificate of Appreciation for Research Publications and Securing position in Top 2% Scientist of the World for year 2022-23 by School of Pharmacy and Technology management, Narsee Monjee Institute of Management Studies, Hyderabad in 2023.
- **Research Incentive Award** in Oct. 2023 for research work publication entitled ‘Thermoresponsive in situ gel of curcumin loaded solid lipid nanoparticle: Design, optimization and in vitro characterization’ in Scopus indexed journal ‘Journal of Drug Delivery Science and Technology’ IF: 5.063
- **Research Incentive Award** in Oct. 2023 for research work publication entitled ‘Investigation of ROS generating capacity of curcumin-loaded liposomes and its in vitro cytotoxicity on MCF-7 cell lines using photodynamic therapy’ in Scopus indexed journal ‘Photodiagnosis and Photodynamic Therapy’ IF: 3.577
- Academic Appreciation Certificate by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh for **Outstanding Results** of over 90% generated in the B. Pharm Course for Pharmaceutical technology-II Subject for session 2015-16
- Academic Appreciation Certificate by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh for **Outstanding Results** of over 90% generated in the B. Pharm Course for **Cosmetic Technology** Subject for session 2015-16
- Academic Appreciation Certificate by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh for **Outstanding Results** of over 90% generated in the B. Pharm Course for **Pharmaceutics-I** Subject for session 2016-17
- Academic Appreciation Certificate by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh for **Outstanding Results** of over 90% generated in the B. Pharm Course for **Pharmaceutical Biotechnology** Subject for session 2016-17
- Academic Appreciation Certificate by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh for **Outstanding Results** of over 90% generated in the B. Pharm Course for Pharmaceutics-XII Subject for session 2016-17

### Research Grants/Projects

- **Principle Investigator** of **SEED Grant** under SEED Funding Scheme of SVKM’s NMIMS for research project entitled ‘Development of lipid based nanocarrier for co-administration of curcumin and piperine to mitigate Alzheimer’s disease’. Reference No.: NMIMS/Seed Funding/SPPSPTM/2024-05/6362; Dated: 29/07/24; Duration: 1 year, Cost: INR 1,91,718.

### **SUBJECT TAUGHT**

Subject Name	Theory/ Practical	Teaching Experience	Level
Novel Drug Delivery System	T	5 Year	UG
Physical Pharmacy-II	T	1 Year	UG
Pharmaceutical Jurisprudence	T	1 Year	UG

Social and Preventive Pharmacy	T	1 Year	UG
Pharmaceutical Product Development	T	1 Year	UG
Communication Skills	T/P	1 Year	UG
Computer applications	P	1 Year	UG
Remedial Biology	T	1 Year	UG
Practice school	P	1 Year	UG
Industrial Pharmacy	T/P	2 Year	UG
Pharmaceutical Engineering	T/P	3 Year	UG
Pharmaceutics – I (Introduction to Pharmaceutics)	T/P	4 Years	UG
Pharmaceutical Chemistry- I (Inorganic)	T/P	1 Years	UG
Pharmaceutical Analysis – I	T/P	1 Years	UG
Pharmaceutical Microbiology	T/P	3 Years	UG
Pharmaceutics – VIII (Cosmetic Technology)	T/P	3 Years	UG
Pharmaceutical Biotechnology	T/P	8 Years	UG
Pharmaceutics – IX (Pharmaceutical Technology I)	T/P	6 Years	UG
Pharmaceutics – XII (Pharmaceutical Technology III)	T/P	6 Years	UG
Pharmaceutical Biochemistry	T/P	3 Year	UG

#### INDUSTRIAL VISIT AND TRAINING

- One day Industrial visits in “Jubilant Life Sciences” Noida.
- One Month Industrial Training at “Modern Laboratories”, Indore, Madhya Pradesh, 452015, from 20<sup>th</sup> April to 20<sup>th</sup> May, 2011.
- 25 days industrial training at “Wilcure Remedies Pvt. Ltd.”, Indore, Madhya Pradesh, 452015, from 23<sup>rd</sup> May to 18<sup>th</sup> June 2011.

#### Speaker/ Guest Lecturer/ Resource Person

- Delivered a Session (Speaker) on “Navigate and utilise the key features of the NMIMS MPC Digital Platform (Version 2.0)” one day Faculty Development Program themed ‘Multi-Program Campus Coordination (MPC)’ conducted in SVKM’s Narsee Monjee Institute of Management Studies (NMIMS), Jadcherla, Hyderabad, on 31<sup>st</sup> August 2024.

#### PROFESSIONAL TRAINING/FDP/Workshop

- Participated in **Dissolution Performance Verification Testing (DPVT)**, one day Workshop conducted by USP, India, hosted by Narsee Monjee Institute of Management Studies (NMIMS), Jadcherla, Hyderabad, on 02 July 2024.
- Participated in **NEP 2020 Orientation and Sensitization** Program under Malaviya Mission Teacher Training Program (MM-TTP) of University Grant Commission (UGC) organized by Malaviya Mission Teacher Training Centre. Pt. Ravishankar Shukla University, Raipur, (C.G.) from 01.12.23 to 09.12.23 (10 days).

- Participated in **DST-STUTI Sponsored Hands-on Training** Program on “Basic Instrumentation Techniques for Qualitative and Quantitative Estimation of Bioactives” organized by Rungta College of Pharmaceutical Sciences and Research, Bhilai in Collaboration with Jamia Hamdard PMU, New Delhi, from 24<sup>th</sup> to 30<sup>th</sup> September 2022.
- Participated in seven days **International Workshop MMTT-2021** on ‘Tools and Techniques to Perform Molecular Modelling and Computer Aided Drug Design’ organized by National Institute of Pharmaceutical Education and Research (**NIPER**), **Guwahati** between January 11-17, 2021.
- **AICTE** Sponsored two weeks **Faculty Development Program**, organized by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh, 490024 from May 4<sup>th</sup> to 17<sup>th</sup>, 2015 under the title ‘Statistics-An Enabling Tool for Research Methodology’.
- **Basic Pedagogy Training Program** on “Objective and outcome based Educational System-Transforming Education to Match Global needs” held from 13<sup>th</sup> to 17<sup>th</sup> May 2015, organized by **EQUATE**, New Delhi, at Rungta College of Engineering and Technology, Bhilai, **Chhattisgarh**.
- **Basic Pedagogy Training Program** on “Objective and outcome based Educational System-Transforming Education to Match Global needs” held from 21<sup>st</sup> to 25<sup>th</sup> November, 2014, organized by **EQUATE**, New Delhi, at Rungta College of Engineering and Technology, Bhilai, **Chhattisgarh**.

#### International Collaboration

Collaborator	Affiliation/Organization	Nature of Collaboration
<b>Dr. Upal Roy, Ph.D.</b>	Assistant Professor Department of Health and Biomedical Sciences, University of Texas Rio Grande Valley, College of Health Affairs, One West University Blvd., Brownsville Texas 78520 Office: (956) 882-5731 Email: upal.roy@utrgv.edu	Research Collaborator
<b>Dr. Anu Puri, Ph.D.</b>	Program Director Cancer Training Branch Center for Cancer Training National Cancer Institute, National Institutes of Health 9609 Medical Center Drive, Room 2W192, Rockville, MD 20850 Phone: 240-276-7788 e-mail: puria@mail.nih.gov	Research Collaborator
<b>Sophia G. Antimisiaris, Ph.D</b>	Professor of Pharmaceutics, Department of Pharmacy, University of Patras, 26500 Rio, Greece Director, Laboratory of Pharmaceutical Technology, University of Patras, Greece Collaborating Faculty member, Institute of Chemical Engineering, ICEHT/FORTH. Tel: +30-2610-962332 mob:6937503020	Research Collaborator

e-mail: santimis@upatras.gr; santimis@gmail.com

**PROFESSIONAL SOCIETIES**

<b>Life Member</b>	: Association of Pharmacy Teachers of India (APTI) [CG/LM-093]
<b>Member</b>	: Chhattisgarh State Pharmacy Council: <b>10117</b>
<b>Member</b>	: Controlled Release Society Indian Chapter ( <b>CRSIC-459</b> )

**PUBLICATION STATISTICS**Publications with Impact Factor (**Cumulative Impact Factor: 246.069**)

Journal Title	Publisher	Impact Factor	No of paper
Journal of Controlled Release	Elsevier	11.467	07
Drug Discovery Today	Elsevier	8.369	02
Expert Opinion on Drug Delivery	Taylor & Francis	8.129	03
International Journal of Biological Macromolecules	Elsevier	7.7	02
Biomedicine and Pharmacotherapy	Elsevier	7.419	02
International Journal of Nanomedicine	Dove Press	7.419	01
Life Sciences	Elsevier	6.780	01
European Journal of Pharmacology	Elsevier	5.195	01
Journal of Drug Delivery Science and Technology	Elsevier	5.062	02
Process Biochemistry	Elsevier	4.885	01
Cellular and Molecular Neurobiology	Springer	4.862	01
Respiratory Medicine	Elsevier	4.582	01
Neurochemistry International	Elsevier	4.297	01
RSC Advances	Royal Society of Chemistry	3.9	01
Journal of Pharmaceutical Sciences	Elsevier	3.7	01
Current stem cell research and therapy	Bentham Science	3.758	05
Current Drug Delivery	Bentham Science	3.758	01
Current Drug Targets	Bentham Science	3.603	01
Current Cancer Drug Target	Bentham Science	3.5	01
Photodiagnosis and Photodynamic Therapy	Elsevier	3.577	01
Current Pharmaceutical Design	Bentham Science	3.551	01
Journal of Porphyrins and Phthalocyanines	World Scientific	1.914	01

**Citation Index**

Particulars	Web of Science	Scopus	Google
<b>Citations</b>	2239	2720	3579
<b>h-index</b>	21	23	27



i10 index	-	-	39
Research Interest Score (RIS)	1954		

### ***Publication Summary***

International Papers	40
National Papers	23
Book Chapter	11
International Conference	05
National Conference	37

### **PUBLICATION**

#### ***SCI Indexed International Journals***

1. Sourav Chougule, Hafiz Ahmed, Snigdha Singh, **Mukta Agrawal**, Ravish J. Patel, Amit Alexander. Optimizing Etodolac and Quercetin Loaded MSNs Using Taguchi Design: An approach for Enhancing Drug Loading Efficiency. Journal of Pharmaceutical Sciences. 2025. Accepted (**Impact Factor: 3.7**). <https://doi.org/10.1016/j.xphs.2024.12.026>
2. Venkata Prathyusha E, Shyam Sudhakar Gomte, Hafiz Ahmed, Prabakaran A, **Mukta Agrawal**, Naveen Chella, Amit Alexander. Nanostructured polymer composites for bone and tissue regeneration. International Journal of Biological Macromolecules. 2024. 284(1); 137834 (**Impact Factor: 7.7**). <https://doi.org/10.1016/j.ijbiomac.2024.137834>
3. Shambo Mohanty, Vaibhavi Meghraj Desai, Rupesh Jain, **Mukta Agrawal**, Sunil Kumar Dubey and Gautam Singhvi. Unveiling the potential of photodynamic therapy with nanocarriers as a compelling therapeutic approach for skin cancer treatment: current explorations and insights. RSC Advances. 2024; 14(30): 21915-21937. (**Impact Factor: 3.9**) <https://doi.org/10.1039/D4RA02564D>
4. Nidhi Sudhir Dhote, Rajat Dineshbhai Patel, Utkarsha Kuwar, **Mukta Agrawal**, Amit Alexander, Parag Jain, Ajazuddin. Application of thermoresponsive smart polymers based in situ gel as a novel carrier for tumor targeting. Current Cancer Drug Targets. 2024; 24(4):375-396. 10.2174/1568009623666230803111718. (**Impact Factor: 3.5**)
5. Snigdha Singha, **Mukta Agrawal**, Rajat Vashista, Rohit K Patel, Sanchita Dhanchandra Sangave and Amit Alexander. Recent advancements on *in vitro* blood-brain barrier model: A reliable and efficient screening approach for preclinical and clinical investigation. Expert Opinion on Drug Delivery. 2023;20(12);1839–1858. (**Impact factor: 8.129**) <https://doi.org/10.1080/17425247.2023.2295940>.
6. Tejas Girish Agnihotri, Amit Alexander, **Mukta Agrawal**, Sunil Kumar Dubey, Aakanchha Jain. In vitro-in vivo correlation in nanocarriers: From protein corona to therapeutic implications. Journal of Controlled Release. 2023; 354: 794-809 (**Impact Factor: 11.467**) <https://doi.org/10.1016/j.jconrel.2023.01.063>
7. Vivek Phatale, Klaudi K. Vaiphei, Shikha Jha, Dnyaneshwar Patil, **Mukta Agrawal**, Amit Alexander. Overcoming skin barriers through advanced transdermal drug delivery approaches. Journal of Controlled Release. 2022; 351:361-380 (**Impact Factor: 11.467**) <https://doi.org/10.1016/j.jconrel.2022.09.025>
8. Eluri Prathyusha, Prabakaran A, Hafiz Ahmed, Mithun Rajendra Dethe, **Mukta Agrawal**, Vijayakumar Gangipangi, Sudhagar S, Kowthavarapu Venkata Krishna, Sunil Kumar Dubey,



- Deepak Bharadwaj, Amit Alexander\*. Investigation of ROS generating capacity of curcumin-loaded liposomes and its *in vitro* cytotoxicity on MCF-7 cell lines using photodynamic therapy. *Photodiagnosis and Photodynamic Therapy*. 2022; 40: 103091 (**Impact Factor: 3.577**) <https://doi.org/10.1016/j.pdpdt.2022.103091>
9. Hafiz Ahmed, Shyam Sudhakar Gomte, Venkata Prathyusha. E, Prabakaran A, **Mukta Agrawal**, Amit Alexander\*. Biomedical applications of mesoporous silica nanoparticles as a drug delivery carrier. *Journal of drug delivery science and technology*. 2022; 76: 103729 (**Impact Factor: 5.062**) <https://doi.org/10.1016/j.jddst.2022.103729>
  10. **Mukta Agrawal**, Madhulika Pradhan, Gautam Singhvi, Ravish Patel, Ajazuddin, Amit Alexander. Thermoresponsive in situ gel of curcumin loaded solid lipid nanoparticle: Design, optimization and in vitro characterization. *Journal of Drug Delivery Science and Technology*. 2022; 71: 103376. (**Impact Factor: 5.062**) <https://doi.org/10.1016/j.jddst.2022.103376>
  11. Mithun Rajendra Dathe, Prabakaran A, Hafiz Ahmed, **Mukta Agrawal**, Upal Roy, Amit Alexander. PCL-PEG copolymer based injectable thermosensitive hydrogels. *Journal of Controlled Release*. 2022; 343: 217-236 (**Impact Factor: 11.467**) <https://doi.org/10.1016/j.jconrel.2022.01.035>
  12. Prabakaran A, **Mukta Agrawal**, Mithun Rajendra Dathe, Hafiz Ahmed, Awesh Yadav, Umesh Gupta, Amit Alexander\*. Nose-to-brain drug delivery for the treatment of Alzheimer's Disease: Current Advancements and Challenges. *Expert Opinion on Drug Delivery*. 2022; 19(1): 87-102 (**Impact factor: 8.129**) <https://doi.org/10.1016/j.jconrel.2018.05.011>
  13. Sunil Kumar Dubey, Shraddha Parab, Amit Alexander, **Mukta Agrawal**, Pavan Kumar Achalla, Udit Narayan Pal, Murali M. Pandey, Prashant Kesharwani. Cold atmospheric plasma therapy in wound healing. *Process Biochemistry*. 2022; 112: 112-123. (**Impact Factor: 4.885**) <https://doi.org/10.1016/j.procbio.2021.11.017>
  14. Sunil Kumar Dubey, Tanya Bhatt, **Mukta Agrawal**, Ranendra Narayan Saha, Swarnlata Saraf, Shailendra Saraf, Amit Alexander\*. Application of chitosan modified nanocarriers in breast cancer. *International Journal of Biological Macromolecules*. 2022; 194: 521-538 (**Impact Factor: 8.025**) <https://doi.org/10.1016/j.ijbiomac.2021.11.095>
  15. **Mukta Agrawal**, Shailendra Saraf, Madhulika Pradhan, Ravish J Patel, Gautam Singhvi, Ajazuddin, Amit Alexander\*. Design and optimization of curcumin loaded nano lipid carrier system using Box-Behnken design. *Biomedicine and Pharmacotherapy*, 2021; 141: 111919. (**Impact Factor: 7.419**) <https://doi.org/10.1016/j.biopha.2021.111919>
  16. **Mukta Agrawal**, Eluri Prathyusha, Hafiz Ahmed, Sunil Kumar Dubey, Prashant Kesharwani, Gautam Singhvi, V.G.M. Naidu, Amit Alexander. Biomaterials in treatment of Alzheimer's disease. *Neurochemistry International*. 2021; 145: 105008. (**Impact Factor: 4.297**) <https://doi.org/10.1016/j.neuint.2021.105008>
  17. Sunil Kumar Dubey, Shraddha Parab, Neha Dabholkar, **Mukta Agrawal**, Gautam Singhvi, Amit Alexander, Ranjeet Ajit Bapat, Prashant Kesharwani. Oral peptide delivery: challenges and the way ahead. *Drug Discovery Today*. 2021; 26(4): 931-950. (**Impact Factor: 8.369**) <https://doi.org/10.1016/j.drudis.2021.01.001>
  18. **Mukta Agrawal**, Shailendra Saraf, Swarnlata Saraf, Upadhyayula Suryanarayana Murty, Sucheta Banerjee Kurundkar, Debjani Roy, Pankaj Joshi, Dhananjay Sable, Yogendra Kumar Choudhary, Prashant Kesharwani, Amit Alexander\*. In-line treatments and clinical initiatives to fight against COVID-19 Outbreak. *Respiratory Medicine*. 2022, 191: 106192. (**Impact Factor: 4.582**) <https://doi.org/10.1016/j.rmed.2020.106192>

19. **Mukta Agrawal**, Shailendra Saraf, Swarnlata Saraf, Sunil K Dubey, Anu Puri, Umesh Gupta, Prashant Kesharwani, V. Ravichandiran, Pramod Kumar, VGM Naidu, Upadhyayula Suryanarayana Murty, Ajazuddina, Amit Alexander\*. Stimuli-responsive In situ gelling system for nose-to-brain drug delivery. *Journal of Controlled Release*. 2020; 327: 235-265. **(Impact Factor: 11.467)** <https://doi.org/10.1016/j.jconrel.2020.07.044>
20. Siddhanth Hejmady, Rajesh Pradhan, Amit Alexander, **Mukta Agrawal**, Gautam Singhvi, Prashant Kesharwani, Sunil K Dubey. Recent advances in targeted nanomedicine as promising antitumor therapeutics. *Drug Discovery Today*. 2020; 25(12): 2227-2244. **(Impact Factor: 8.369)** <https://doi.org/10.1016/j.drudis.2020.09.031>
21. Pavan Kumar Samudrala, Pramod Kumar, Kamlesh Choudhary, Nagender Thakur, Gaurav Suresh Wadekar, Richa Dayaramani, **Mukta Agrawal**, Amit Alexander\*. Virology, pathogenesis, diagnosis and in-line treatment of COVID-19. *European Journal of Pharmacology*. 2020; 883: 173375. **(Impact Factor: 5.195)** <https://doi.org/10.1016/j.ejphar.2020.173375>
22. **Mukta Agrawal**, Swarnlata Saraf, Shailendra Saraf, Sunil K Dubey, Anu Puri, Ravish J Patel, Ajazuddina, V. Ravichandiran, Upadhyayula Suryanarayana Murty, Amit Alexander\*. *Recent strategies and advances in the fabrication of Nano Lipid Carriers and their application towards brain targeting*. *Journal of Controlled Release*. 2020; 321: 372-415. **(Impact Factor: 11.467)** <https://doi.org/10.1016/j.jconrel.2020.02.020>
23. Sunil Kumar Dubey, K.K. Lakshmi, Kowthavarapu Venkata Krishna, **Mukta Agrawal**, Gautam Singhvi, Ranendra Narayana Saha, Swarnalata Saraf, Shailendra Saraf, Rahul Shukla, Amit Alexander\*. *Insulin mediated novel therapies for the treatment of Alzheimer's disease*. *Life Sciences*. 2020; 249: 117540. **(Impact Factor: 6.780)** <https://doi.org/10.1016/j.lfs.2020.117540>
24. Sunil Kumar Dubey, Amit Alexander\*, Munnangi Sivaram, **Mukta Agrawal**, Gautam Singhvi, Swapnil Sharma, Richa Dayaramani. *Uncovering the Diversification of Tissue Engineering on the Emergent Areas of Stem Cells, Nanotechnology and Biomaterials*. *Current Stem Cell Research and Therapy*. 2020; 15(3): 187-201. **(Impact Factor: 3.758)** <https://doi.org/10.2174/1574888x15666200103124821>
25. Amit Alexander\*, **Mukta Agrawal**, Swarnlata Saraf, Shailendra Saraf, Ajazuddin, Mahavir B Chougule. *Formulation strategies of nano lipid carrier for effective brain targeting of anti-AD drugs*. *Current Pharmaceutical Design*. 2020; 26(27): 3269-3280. **(Impact Factor: 3.551)** <https://doi.org/10.2174/1381612826666200212120947>
26. Sunil Kumar Dubey, Amit Alexander\*, K. Sai Pradyut, **Mukta Agrawal**, Rupesh Jain, Ranendra Narayana Saha, Gautam Singhvi, Swarnlata Saraf and Shailendra Saraf. *Recent avenues in Novel Patient-Friendly Techniques for the Treatment of Diabetes*. *Current Drug Delivery*. 2020; 17(1): 3-14. **(Impact Factor: 3.758)** <https://doi.org/10.2174/1567201816666191106102020>
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30. Sunil Kumar Dubey, Munnangi Siva Ram, Kowthavarapu Venkata Krishna, Ranendra Narayana Saha, Gautam Singhvi, **Mukta Agrawal**, Ajazuddin, Swarnlata Saraf, Shailendra Saraf, Amit Alexander\*. *Recent expansions on cellular models to uncover the scientific barriers towards drug development for Alzheimer's Disease*. Cellular and Molecular Neurobiology, 2019; 39(2): 181-209 (**Impact Factor: 4.862**). <https://doi.org/10.1007/s10571-019-00653-z>
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32. **Mukta Agrawal**, Amit Alexander\*, Shailendra Saraf, Swarnlata Saraf, Junaid Khan, Tapan Kumar Giri, N Vishal Gupta, Ravish J Patel, Ajazuddin. *Recent biomedical applications on stem cell therapy: A brief review*. Current stem cell research and therapy, 2019; 14(2): 127-136. (**Impact Factor: 3.758**). <https://doi.org/10.2174/1574888x13666181002161700>
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35. Amit Alexander, Sabahuddin Siddique, **Mukta Agrawal**, Ajazuddin, Ahmed M Shehata, Mahmoud A Shaker, Syed Ata Ur Rahman, Mohi Iqbal M Abdul, Mohamed A. Shaker. *Nanotechnology: A non-invasive diagnosis and therapeutic tool for brain disorders*. African Journal of Pharmacy and Pharmacology, 2019; 13(10): 118-123. 10.5897/AJPP2019.5008
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38. **Mukta Agrawal**, Swarnlata Saraf, Shailendra Saraf, Sophia G. Antimisiaris, Nobuhito Hamano, Shyh-Dar Li, Mahavir Chougule, Sunday A. Shoyele, Umesh Gupta, Ajazuddin, Amit Alexander\*. *Recent advancements in the field of nanotechnology for the delivery of anti-Alzheimer drug in the brain region*. Expert Opinion on Drug Delivery. 2018; 15(6): 589-617. (**Impact Factor: 8.129**) doi: 10.1080/17425247.2018.1471058

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40. **Mukta Agrawal**, Ajazuddin, Dulal K. Tripathi, Swarnlata Saraf, Shailendra Saraf, Sophia G. Antimisariis, Spyridon Mourtas, Margareta Hammarlund-Udenaes, Amit Alexander\*. *Recent advancements in liposomes targeting strategies to cross the blood-brain barrier (BBB) for the treatment of Alzheimer's disease*. Journal of Controlled Release 2017; 260: 61-77 (**Impact Factor: 11.467**) <https://doi.org/10.1016/j.jconrel.2017.05.019>

#### **Scopus Indexed/UGC listed National Journal**

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5. Kritika Kanoujia, Chandraprabha Dewangan, Ayushi Masih, Dipti Sinha, Divya Oraon, Manisha Jaiswal, Monika Sahu, Ranjeeta Kumari, Sapna Pradhan, Ravi Suman, Rajkishan Dewangan, Roman Banjare, Pradeep Paikra, Mukesh Rawtiya, **Mukta Agrawal**, Ajazuddin, D. K. Tripathi, Amit Alexander. *Self Microemulsifying Drug Delivery System (SMEDDS): A Novel Approach to Improve the Therapeutic Efficacy of Orally Administered Drug*. Research Journal of Pharmaceutical Dosage Forms and Technology 2018; 10(2): 95-102.
6. Shubham Tripathi, Somnath Patel, Ritesh Patel, Shraddha, Pushpendra, Sachin, Neetish, Mahendra, Kuldeep, Prashant, Rajesh Patel, Girish, Nitin, Tomanlal, Amrita Thakur, **Mukta Agrawal**, Ajazuddin, D. K. Tripathi, Amit Alexander. *A Review on Biocompatible Hydrogel: Formulation Aspect and Evaluation*. Research Journal of Pharmaceutical Dosage Forms and Technology 2018; 10(2): April- June.



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8. Alok Ranjan, Aishwarya Sahu, Akansha Yadav, Alka Payasi, Akash Jaiswal, Akshay Kumar, Akash Sahu, Ashwani Jangde, Chandrashekhar Nayak, Dev Kumar, Harshita Yarda, Mitali Sahu, Nokesh Sahu, Rajesh Patel, Nisha Nair, **Mukta Agrawal**, Ajazuddin, D. K. Tripathi, Amit Alexander. *A Short Review on the Formulation of Transdermal Dermal Drug Delivery System (TDDS)*. Research Journal of Pharmaceutical Dosage Forms and Technology 2018; 10(2): 90-94.
9. Rita Devi, Vicky Soni, Savej Malik, Alok Singh, Kundan Banjare, Vikram Singh, Tanuja Janghel, Pooja Pal, **Mukta Agrawal**, D. K. Tripathi, Ajazuddin, Amit Alexander\*. *Emphasizing the pharmaceutical consideration behind the development of gastro-retentive dosage form*. Research J. Pharm. and Tech 2017; 10(4): 1209-1214. 10.5958/0974-360X.2017.00217.7
10. Homendra Kumar Sahu, Kamdev Sen, Raju Patel, Hulash Sahu, Deepika Sahu, Gulshan Sahu, Chandrashekhar Jain, Narayan Prasad Chandra, **Mukta Agrawal**, D. K. Tripathi, Ajazuddin, Amit Alexander\*. *An overview on the established pharmaceutical aspects associated with the development of hydrogels*. Research J. Pharm. and Tech 2017; 10(3): 944-953. 10.5958/0974-360X.2017.00173.1
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17. Vandana Devi Sahu, **Mukta Agrawal**, Mukesh Sharma, Sandhya Chandrakar, Sujata Gupta, Garima Sharma, Kalyani Dewangan, Harsha Solanki, Manisha Majumdar, D. K. Tripathi, Amit Alexander, Ajazuddin. *Formulation and Development of Cephalexin Oral Reconstitutable Suspension*. Research J Pharm and Tech 2016; 9(7): 764-768. 10.5958/0974-360X.2016.00145.1
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19. Parijeeta Raut, Divya Bhosle, Akshay Janghel, Shraddha Deo, Chetan Verma, Shyama S. Kumar, **Mukta Agrawal**, Nisha Amit, Mukesh Sharma, Tapan Giri, D. K. Tripathi, Ajazuddin, Amit Alexander\*. *Emerging Pressurized Liquid Extraction (PLE) Techniques as Innovative Green Technologies for the Effective Extraction of the Active Phytopharmaceuticals*. Research J Pharm and Tech 2015; 8 (6): 801-812. 10.5958/0974-360X.2015.00129.8
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23. Divya Bhosle, Akshay Janghel, Shraddha Deo, Parijeeta Raut, Chetan Verma, Shyama S. Kumar, **Mukta Agrawal**, Nisha Amit, Mukesh Sharma, Tapan Giri, D. K. Tripathi, Ajazuddin, Amit Alexander\*. *Emerging ultrasound assisted extraction (UAE) Techniques as Innovative Green Technologies for the effective extraction of the active phytopharmaceuticals*. Research J. Pharm. and Tech 2015; 8(7): 963-970. 10.5958/0974-360X.2015.00161.4

#### BOOK CHAPTER CONTRIBUTED

1. **Mukta Agrawal**, Kiran Rathod, and Upal Roy. Chapter 4: Application of Polymeric Nanoparticles for Brain Targeting. In: Amit Alexander (eds) Application of Nanocarriers in Brain Delivery of Therapeutics. Springer, Singapore. 2024; 69-95. ISBN: 978-981-97-2859-6. [https://doi.org/10.1007/978-981-97-2859-6\\_4](https://doi.org/10.1007/978-981-97-2859-6_4).
2. **Mukta Agrawal**, and Richa Dayaramani. Stimuli-Responsive Polymers for Brain Delivery. In: Amit Alexander (eds) Application of Nanocarriers in Brain Delivery of Therapeutics.



- Springer, Singapore. 2024; 263-283. ISBN: 978-981-97-2859-6. [https://doi.org/10.1007/978-981-97-2859-6\\_10](https://doi.org/10.1007/978-981-97-2859-6_10)
3. **Mukta Agrawal**, and Vaishnavi Kulkarni. Current Clinical Advancements of Nanocarriers for Brain Targeting and Limitations in Clinical Translation. In: Amit Alexander (eds) Application of Nanocarriers in Brain Delivery of Therapeutics. Springer, Singapore. 2024; 371-390. ISBN: 978-981-97-2859-6. [https://doi.org/10.1007/978-981-97-2859-6\\_14](https://doi.org/10.1007/978-981-97-2859-6_14)
  4. **Mukta Agrawal**, Snigdha Singh, and Amit Alexander. Chapter 10 - Liposomes for drug delivery to the brain *in* Liposomes in Drug Delivery: What, Where, How and When to deliver. Academic Press, Elsevier. 2024; 243-262. ISBN: 9780443154928. <https://doi.org/10.1016/B978-0-443-15491-1.00006-7>.
  5. **Mukta Agrawal**, Upal Roy, and Amit Alexander. Chapter 7- Liposome: A potential drug delivery vector to treat dementia *in* Nanomedicine-based approaches for the treatment of dementia. Academic Press, Elsevier. (Edited by Umesh Gupat & Prashant Kesharwani) 2023: 149-168. ISBN: 978-0-12-824331-2 <https://doi.org/10.1016/B978-0-12-824331-2.00010-8>
  6. **Mukta Agrawal**, Aditya Narayan Konwar, Amit Alexander, and Vivek Borse. Chapter 16 - Nose-to-brain delivery of biologics and stem cells; *in* Direct Nose-to-Brain Drug Delivery: Mechanism, Technological Advances, Application and Regulatory Updates, Academic Press, Elsevier. (Edited by C V Pardedhi & E B Souto) 2021: 305-328. ISBN: 978-0-12-822522-6. <https://doi.org/10.1016/B978-0-12-822522-6.00015-1>
  7. K. K. Lakshmi, Siddhanth Hejmady, S. Shridula, Amit Alexander\*, **Mukta Agrawal**, Gautam Singhvi, Sunil Kumar Dubey\*. Chapter 2 - Analytical quality by design for spectrophotometric method development; *in* Handbook of Analytical Quality by Design, Academic Press, Elsevier. (Edited by W Almalki & M Rahman)2021: 15-44. ISBN 9780128203323. <https://doi.org/10.1016/B978-0-12-820332-3.00003-0>
  8. Amit Alexander, **Mukta Agrawal**, Mahavir Bhupal Chougule, Shailendra Saraf, Swarnlata Saraf. "Nose-to-brain drug delivery: an alternative approach for effective brain drug delivery". Nanopharmaceuticals- Expectations and Realities of Multifunctional Drug Delivery Systems. Elsevier. (Edited by Ranjita Shegokar) Volume 1; 2019: 175-200. ISBN: 978-0-12-817778-5.
  9. Amit Alexander, **Mukta Agrawal**, Pooja Yadav, Gunjan Jeswani, Vinay Sagar Verma, Sabahuddin Siddique, Ajazuddin; "Chapter 17: Targeted Delivery through Carbon Nanomaterials: Applications in Bioactive Delivery Systems". Advances and Avenues in the Development of Novel Carriers for Bioactives. Elsevier. (Edited by Manju R Singh, Deependra Singh, J R Kanwar and Nagendra Singh Chouhan) 2020: 509-524. ISBN: 978-0-12-819666-3. <https://doi.org/10.1016/B978-0-12-819666-3.00017-1>
  10. **Mukta Agrawal**, Sunil Kumar Dubey, Junaid Khan, Sabahuddin Siddique, Ajazuddin, Swarnlata Saraf, Shailendra Saraf, Amit Alexander\*. "Extraction of catechins from green tea using supercritical carbon dioxide". Green Sustainable Processes for Chemical and Environmental Engineering and Science. Elsevier. (Edited by Inamuddin) 2020: 41-66. ISBN: 978-0-12-817386-2.
  11. Pooja Yadav, **Mukta Agrawal**, Amit Alexander, Ravish Patel, Sabahuddin Siddique, Shailendra Saraf, Ajazuddin. "Polymer production and processing using supercritical carbon dioxide". Green Sustainable Processes for Chemical and Environmental Engineering and Science. Elsevier. (Edited by Inamuddin). 2020: 1-16. ISBN: 978-0-12-817386-2. DOI: <https://doi.org/10.1016/B978-0-12-817388-6.00001-5>

#### SEMINAR/CONFERENCE

### International

1. **Oral Presentation at Young Scientist Conclave (YSC) 2024** as a part of India **International Science Festival (IISF) 2024** organized by IIT Guwahati in collaboration with CSIR, India under DBT and Ministry of Science and Technology, Govt. of India from 30<sup>th</sup> Nov. to 3<sup>rd</sup> Dec. 2024 under the title “Enhanced Cytotoxicity & ROS generation ability of Curcumin by encapsulating in Liposome: A Photodynamic Therapy.”
2. **Oral Presentation at Pharmacon 2023**, an International Conference on ‘New Horizon on Drug, Devices & Diagnostics’, organized by National Institute of Pharmaceutical Education and Research, Hyderabad from 14-16 September 2023, entitled “Comparative Analysis of SLN and NLC as Novel Drug Carrier System”.
3. **Participated** in 20<sup>th</sup> International e-symposium of Controlled Release Society Indian Local Chapter (**CRSIC**) on Advances in Technology and Business Potential of New Drug Delivery Systems from 24<sup>th</sup> to 26<sup>th</sup> February 2022.
4. **Oral Presentation at PharmSci-2020**, 3<sup>rd</sup> International conference “Frontier in Pharmaceutical Sciences and Research”, on Integrating Pharmaceutical Technology with other branch of Science for Health Management, organized from 1<sup>st</sup> to 2<sup>nd</sup>, February 2020 by Columbia Institute of Pharmacy, Raipur, Chhattisgarh, under the title ‘Development of Novel Carrier System for Drug Targeting to treat Alzheimer's Disease.’
5. **Poster Presentation at PharmSci-2017**, 2<sup>nd</sup> International conference “Frontier in Pharmaceutical Sciences and Research”, on Advances in Development, Delivery system and Clinical Monitoring of Drug, held on 23<sup>rd</sup> to 24<sup>th</sup>, September 2017 at Columbia Institute of Pharmacy, Raipur, Chhattisgarh, under the title ‘A Neurodegenerative Disorder- Alzheimer’s Disease: Current Status and Future Possibilities.’
6. **Poster Presentation at SFEC 2016**, 3<sup>rd</sup> International Congress Society for Ethanopharmacology, on Ethanopharmacology and evaluation of Medicinal Plants- Global Perspectives, organized from 19<sup>th</sup> to 21<sup>st</sup>, February 2016 at Pt. Ravishankar Shukla University, Raipur, Chhattisgarh, under the title ‘Extraction, Characterization and In-vivo Screening of Anti-inflammatory activities of *Lagasca mollis* cav.’

### National

1. **Research Presentation** entitled “Design and Optimization of Anti-inflammatory drug loaded Solid-lipid nanoparticle: A Quality-by-Design approach” at One Day National Seminar on “Nanotechnology in Healthcare: Opportunities and Challenges” organized by Department of Pharmaceutics, Institute of Pharmacy, Nirma University in association with **Controlled Release Society** Indian Chapter on October 28, 2021.
2. **Oral Presentation** at Dissolution Research Presentation India (**DRPI**) **2021-Online** organized by Society of Pharmaceutical Dissolution Science (**SPDS**) in collaboration with Association of Pharmaceutical Teachers of India (**APTI**), held on 17 July 2021, for presenting research work under the title “Controlled and prolonged release of an herbal antioxidant (curcumin) from Nano-lipid carrier”. Secured **First Position** in Central Zone with a **Cash Prize of Rs. 10000**
3. **Oral Presentation** at **Dissolution Research Presentation India** (DRPI) 2020-Online organized by Society of Pharmaceutical Dissolution Science (**SPDS**) in collaboration with Association of Pharmaceutical Teachers of India (**APTI**), held on 7<sup>th</sup> June 2020, for presenting research work under the title A Comparative Assessment of Dissolution Profile of Curcumin and Piperine from Nano-lipid carrier.
4. **Oral Presentation** at **CGCOST** Sponsored **National Seminar** on “Current need of Patent

- and Publication in Research for Global Recognition” at Rungta College of Pharmaceutical Sciences and Research, Kohka-kurud road, Bhilai, Chhattisgarh, India from 9<sup>th</sup> to 10<sup>th</sup> March 2018, under the title ‘Nose-to-Brain drug delivery for the treatment of Alzheimer’s disease: Challenges and Progress towards patentability and clinical application.’
5. **Poster Presentation at 69<sup>th</sup> Indian Pharmaceutical Congress**, organized between 22<sup>nd</sup> to 24<sup>th</sup>, December 2017 at Chitkara University, Rajpura, under the title ‘Development and characterization of curcumin loaded lipid nanocarrier for brain targeting to treat Alzheimer’s disease.’
  6. **Poster presentation at ICMR Sponsored National Smeinar**, on “Prospects and Avenues for *in vivo* Studies on Animal Models and Human Volunteers for Treatment of Oral Cancer” organized by Shri Rawatpura Sarkar Institute of Pharmacy, Kumhari, Chhattisgarh, held from 5<sup>th</sup> to 6<sup>th</sup>, April 2017, under the title ‘*in vivo* Screening of a Herbal Anti-inflammatory Agent *Lagasca mollis cav.*’
  7. **Poster presentation at APTI Central Zone National Seminar (APTI Women Forum)**, on “Treat to target approach for dermal disorders: Newer perspectives and challenges” organized by **APTI Women Forum** at University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur, **Chhattisgarh**, held from 24<sup>th</sup> to 26<sup>th</sup>, March 2017, under the title ‘Modified liposomal strategies for effective delivery across BBB to treat Alzheimer’s disease.
  8. **Oral Presentation** and Won the title of ‘**Young Scientist**’ at 14<sup>th</sup> Chhattisgarh Young Scientists Congress, 2016, jointly organized by Chhattisgarh Council for Science and Technology (**CGCOST**) and Bilaspur University, Bilaspur Chhattisgarh, held during 28<sup>th</sup> to 29<sup>th</sup> February 2016 under the title ‘Formulation and development of domperidone loaded self-micro emulsifying drug delivery system’.
  9. **Poster Presentation at 68<sup>th</sup> Indian Pharmaceutical Congress**, organized between 16<sup>th</sup> to 18<sup>th</sup>, December 2016 at AU College of Pharmaceutical Sciences, Andhra University, Visakhapatnam, under the title ‘Role of Hydrophilic Polymer matrices for the delivery of domperidone.’
  10. **Indian Pharmaceutical Association Convention (IPA) 2016**, on “New Horizons of Pharmacy Profession: Integrating Education, Research, Industry and Pharmacy Practices” organized by IPA Chhattisgarh state branch, University Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur, **Chhattisgarh**, held on 23<sup>rd</sup> July 2016.
  11. **Poster Presentation in APTI and SSIRT Sponsored National Seminar** on ‘Hybridization of Pharmaceutical Sciences with Technology- Emerging Trends’, organized by Sagar Institute of Research, Technology and Science – Pharmacy, Bhopal, held on 30<sup>th</sup> April 2016, under the title ‘Microencapsulation: Recent Advancements and Application in Drug Targeting’.
  12. **Poster Presentation at 67<sup>th</sup> Indian Pharmaceutical Congress**, organized between 19<sup>th</sup> to 21<sup>st</sup>, December 2015 at JSS University, Mysuru, Karnataka, under the title ‘Role of Hydrophilic Polymer matrices in the Development of Buccal Patches for the delivery of an Antiemetic drug.’
  13. **Poster Presentation in CGCOST Sponsored National Conference**, organized by Shri Shankaracharya Technical Campus, Bhilai, Chhattisgarh, held on March 21<sup>st</sup>, 2015, under the title ‘Development of a novel carrier for the treatment of Ocular Keratitis.
  14. **e-Poster Presentation in CGCOST Sponsored National Seminar**, organized by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh, 490024 held on February 18<sup>th</sup> to 19<sup>th</sup>, 2015, under the title ‘Newer Dimensions in the

- delivery of Phytopharmaceuticals’
15. **Poster Presentation at 66<sup>th</sup> Indian Pharmaceutical Congress**, organized between 23<sup>rd</sup> to 25<sup>th</sup>, January 2015 at Hitex, Hyderabad, under the title ‘Formulation and Characterization of Cyclodextrin based Nanosponges containing Fluconazole for Ocular Drug Delivery’.
  16. **Poster Presentation in CGCOST Sponsored National Seminar**, organized by Apollo College of Pharmacy, Anjora, Durg, Chhattisgarh, 491001 held on November 21<sup>st</sup> to 22<sup>nd</sup>, 2014, under the title ‘An Alternative, Emerging and Effective Health Care Remedy: Nutraceuticals’.
  17. **Poster Presentation in AICTE Sponsored National Seminar**, organized by Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud road, Bhilai, Chhattisgarh, 490024 held on March 13<sup>th</sup> to 14<sup>th</sup>, 2014, under the title ‘Cyclodextrin based Nanosponge: A Novel Carrier System for Efficient Drug Delivery’.
  18. Co. Author in **Poster Presentation at spirit’s 2012** organized from 25<sup>th</sup> to 26<sup>th</sup> February under the auspices of The Pharmaceutical Society, Department of Pharmaceutics, IT-BHU, Varanasi, under the title ‘Isolation of starch from Trapa bispinosa and evaluation of its physical and technological properties as a binder in tablet formulation’.
  19. **Participated at All India Pharmacy Quiz** during National Pharmacy Week Celebration organized by College of Pharmacy, Madras Medical College, Chennai in November 2011.
  20. Co. Author in **Poster Presentation at 62<sup>nd</sup> Indian Pharmaceutical Congress**, organized between 17<sup>th</sup> to 19<sup>th</sup> Dec 2010 at Manipal University Karnataka, under the title ‘Isolation of starch from Trapa bispinosa and evaluation of its physical and technological properties as a binder in tablet formulation’.

#### **Continuing Education Program**

- **Participated** in PCI sponsored Continuing Education Program (CEP) on “Effective Teaching Learning in Pharmacy Education” held at Rungta College of Pharmaceutical Sciences and Research, Kohka-Kurud Road, Bhilai from 27 to 29 March 2019.

#### **Seminar/Conference Attended**

1. Participated in IP Awareness/Training Program under National Intellectual Property Awareness Mission (NIPAM) organized by **Intellectual Property Office**, India on 13 September 2023.
2. Participated in IP Awareness/Training Program under National Intellectual Property Awareness Mission (NIPAM) organized by **Intellectual Property Office**, India on 14 September 2022.
3. Participated in Webinar on “Infection Prevention and Control Practices in a Healthcare Setup” held on November 7, 2020, organized by Department of Health System Management Studies (DHSMS), **JSSAHER, Mysuru**.
4. Participated in National Virtual Seminar on “Physical and Psychological Wellness of Women at Home and Workplace” organized by **Columbia Institute of Pharmacy**, Raipur, India from November 25-26, 2020.
5. Participated in "SARS-INDO-US Immunology Workshop" organized by **Indian Institute of Technology (IIT) Ropar**, India & George Washington University, USA held on 12 & 13 June 2020.
6. Participated in Webinar titled "Manodasha: A Webinar on Psycho-Socio-Economical wellbeing during COVID-19 Pandemic" held on 30 to 31 May 2020 organized by **NIPER**

- Guwahati** and Jamia Hamdard in collaboration with WomennoVator.
7. Participated in Webinar titled "COVID-19 and the role of Natural Products" held on 29 May 2020.x in joint association with **SRM Institute of Science and Technology and BIT Mesra**.
  8. Participation in the webinar titled "The Jumping Species: Novel Coronavirus 2019: Replication Cycle & Molecular Targets for Developing Antivirals & Vaccines" in joint association with **BIT Mesra and IIT Kharagpur** on 29th May 2020.
  9. Participation in the webinar titled "Spreading the Healthcare Administration: Essentials to develop your best talent" organized by Department of Health System Management Studies (DHSMS), **JSSAHER, Mysuru** on 23rd July 2020.
  10. Participation in the webinar titled "Investigation of potential new treatments for diabetes, cancer and COVID-19" organized by Department of Zoology, **Mizoram University** on 6th July 2020.
  11. Participation in the webinar titled "Positive Supervision" organized by Department of Clinical Psychology, **Mizoram University** on 7th July 2020.
  12. Participation in the webinar titled "IGIS Geospatial Applications and CAD in the Era of Modern Technology" organized by **Mizoram University** on 7th July 2020.
  13. Participation in the webinar titled "Tropical Parasite and their Treatments" organized by **Mizoram University** on 16th July 2020.
  14. Participation in the webinar titled "COVID-19, Aviation and Tourism: Implications for Destinations and Managers of Tourism Enterprises" organized by **Mizoram University** on 31st July 2020.
  15. Participation in Pharmacy Education Webinar Series-8 in the theme of "Advancing Scientific knowledge in Times of Pandemics" organized by **C.L. Baid Mehta College of Pharmacy** in association with MYBO Group on 24th July 2020.
  16. Participation in Webinar titled "Global Opportunity in Pharmaceutical Sector" organized by **Rungta Group of Institutions (R1)** on 18 and 19th July 2020.
  17. Participation in Webinar titled "International Webinar: Impurity Profiling of Pharmaceuticals" organized by **JSS College of Pharmacy, Ooty** on 30th June 2020.

## Technical Skills

### Formulation and Characterization

- Formulation techniques of **lipid nanocarriers** (NLC, SLN, nanoemulsion etc.), **mucoadhesive system, in situ gel and stimuli responsive nasal gel**
- Preformulation studies of drug and excipients using Spectroscopic Analysis through **UV-spectrophotometer, IR-spectroscopy, FTIR**, etc.
- Characterization and Evaluation of Novel Carrier System (like Nanoparticle, Liposome, Microemulsion, Hydrogel etc.) using **Zeta sizer, Rotary Evaporator, Lyophilizer, Homogenizer, Colorimeter, DSC** etc.
- **Drug Release** study using dissolution apparatus and Franz Diffusion cell

### Equipment Purview

- Basic lab equipment
- UV Spectrophotometer (Shimadzu)
- Zetasizer (Malvern)



- Rotary Evaporator (Buchi)
- Homogenizer (IKA)
- Ultrasonicator/Probe sonicator
- Fluorescent microscope (Leica)
- Differential scanning calorimeter
- X-ray diffractor
- Fourier Transform Infrared Spectroscopy
- Lyophilizer (Virtis)
- Dissolution apparatus (USP type I and II)
- Diffusion study by Franz Diffusion cell

#### Others

- Scientific data retrieval from various databases including **Science Direct, PubMed, Scopus, Google Scholar, Research Gate, Publons, and Web of Science.**

#### Software Skills

- **Computer software:** Proficient in Windows operating systems (XP, 7, 8, 8.1 & 10), Data processing software such as MS Office Package (Word, Excel, Powerpoint) & Reference Management Software (Endnote & Mendeley).
- **Graphic Design software's:** CorelDraw
- **Statistical assessment & QbD:** Design Expert, DDSolver, PKSolver

#### References

**1. Prof. Sanjay K Banerjee**

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**Date: 10.02.2025**

**Dr. Mukta Agrawal**