



Dr. Priyanka Tyagi

Assistant Professor

Department of Botany
Maitreyi College
University of Delhi

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EDUCATION

Doctor of Philosophy

Institute of Nuclear Medicine & Allied Sciences (INMAS), DRDO, Delhi
(registration from C.C.S. University)

Completed, February 2012

Master of Science, Biotechnology

Banasthali Vidyapith, Rajasthan

Completed, June 2004

78%

Received Merit Award

Bachelor of Science

Banasthali Vidyapith, Rajasthan

Completed, June 2002

76%

WORK EXPERIENCE

Total Experience: 11+ years (7.9 years' Teaching & 4 years' Post-Doctoral Research experience)

Core Research Areas and Interests:

Haemostasis and Wound Healing, Drug Delivery system, Formulation development, Biomaterials

TEACHING EXPERIENCE

- I. Jan 2024 – Till now
Assistant Professor
Department of Botany
Maitreyi college
University of Delhi
- II. June 2023 – Dec 2023 (6 months)
Assistant Professor
Department of Biotechnology
Jaypee Institute of Technology (JIIT)
Noida, Sec 62, Uttar Pradesh
- III. August 2016 – June 2023 (6.10 years)
Faculty-in-charge (Biological Sciences)/ Assistant Professor

III. July 2005 - October 2006 (1.3 years)

Lecturer

DR. K. N. Modi Institute of Pharmaceutical Education & Research (KNMIPER), Modi Nagar, Uttar Pradesh
Responsibilities- Taught UG classes of Biotechnology

RESEARCH EXPERIENCE (Total = 4 years)

I. June 2012 – June 2015 (3 years)

DST funded Women Scientist Scheme (WOS-A)- **SR/WOS-A/LS-455/2011** (G)

Title of Project “Development of novel polymer based formulation for oral decorporation of heavy metals using FDA approved chelating agents”

II. June 2015- June 2016 (1 year)

Research Associate

Centre for Biomedical Engineering, IIT- Delhi

Title of Project “Development of biodegradable NPs for concomitant delivery of anticancer peptide/ DNA and chemotherapeutic for cancer therapy”

Research Guidance Areas

- **Wound Healing**
 - Formulation for pre-hospital wound care
 - Wound care for diabetics (DFU)
 - Wound dressings
 - Radiolabelling and Gamma scintigraphy

- **Biological activities of ligand metal complexes**
 - Antimicrobial ligand metal complexes
 - Stability and safety assays

PhD SCHOLARS:

Completed = 1 (As Guide)
Thesis submitted = 1 (As Guide)

List of Publications

1. Synthesis, Characterisation and Antibacterial Investigation of Mononuclear Copper (II) Complexes of Amine-phenolate based Ligands. Ambika Jindal, Sumeet Kapoor, Indresh Verma, Anish Raju, Himanshu Arora, **Priyanka Tyagi**, *Polycyclic Aromatic Compounds*. 2023; 1-16
2. Breast Cancer Associated Conventional and Advanced Therapies. Gautam KA, Singh N, **Tyagi P**, Jha G, Raman A., *Int J Pharm Phytopharmacol Res*. 2023; 13(3):22-37.

3. Curcumin Coated 3D Biocomposite Scaffolds based on Chitosan and Cellulose for Diabetic Wound Healing. Megha Gupta, Arpit Sharma, Chandra Shekhar Beniwal, **Priyanka Tyagi**, *Heliyon*.2022;8(11)
4. FTIR and GC-MS Analysis of Curcumin Loaded Chitosan Hydrogel for Diabetic Wound. Gupta Megha, Sharma Arpit, Beniwal Chandra Shekhar and **Tyagi Priyanka**, *Res. J. Biotech.* 2022;17(7)
5. Copper(II) monomer bearing phenolate-based ligand: Theoretical and Experimental Visions. Ambika Jindal, Pratibha Agarwal, Indresh Verma, Ghazala Khanum, Khaled Althubeiti, Nazia Siddiqui, Saleem Javed, **Priyanka Tyagi** & Himanshu Arora, *Polycyclic Aromatic Compounds*. 2022
6. Fabrication of Three-dimensional Bioactive Composite Scaffolds for Haemostasis and Wound Healing. Divya Tripathi, Arpit Sharma, **Priyanka Tyagi**, Chandra Shekhar Beniwal, Gaurav Mittal, Abhinav Jamini, Harpal Singh, Amit Tyagi, *AAPS PharmSciTech*. 2021 Apr 20;22(4):138
7. Emerging trends of engineering approaches for microbial nanomaterial synthesis and its applications. Raunak Dhanker, Touseef Hussain, **Priyanka Tyagi**, Kawal Jeet , Shashank S. Kamble, *Frontiers in Microbiology*. 2021. 12:638003
8. Comparative Analysis of Collagen and Chitosan based Dressing for Haemostatic and Wound Healing Application. Tripathi D, Rastogi K, **Tyagi P**, Rawat H, Jamini A, Mittal G, Singh H, Tyagi A, *AAPS PharmSciTech*, 2021, 22(3):76. |
9. RNA-loaded dendritic cells: more than a tour de force in cancer therapeutics. Joshi A, Tandel N, Tyagi P, Dalai SK, Bisen PS, Tyagi RK, *Immunotherapy*, 11 (13), 1129-1147, 2019.
10. Humanized mice are instrumental to the study of *Plasmodium falciparum* infection. Tyagi RK , Tandel N , , Deshpande R, Engelman RW, Patel SD, **Tyagi P**, *Frontiers in Immunology*, 9, 2550, 2018
11. Copper (II) dimers stabilized by bis (phenol) amine ligands: Theoretical and Experimental Insights (2018). Amit Rajput, Akhilesh Kumar, Arunava Sengupta, **Priyanka Tyagi**, Himanshu Arora, *New Journal of Chemistry*, 2018,42, 12621-12631.
12. Concomitant Delivery of Paclitaxel and NuBCP-9 peptide for synergistic enhancement of cancer therapy (2018). Dikshi Gupta, Manoj Kumar, **Priyanka Tyagi**, Sumeet Kapoor, Amit Tyagi, Tarani Kanta Barman, Surender Kharbanda, Donald Kufe, Harpal Singh, *Nanomedicine: Nanotechnology, Biology and Medicine*, 14(4), 1301-1313.
13. Decorporation of Iron Metal using Dialdehyde Cellulose-Deferoxamine Microcarrier (2017), **Priyanka Tyagi**, Amit Kumar, Dikshi Gupta, Harpal Singh, *American Association of Pharmaceutical Sciences PharmaSci Tech*, 18(1), 156-165.
14. Blood Kinetics and Biodistribution = Study of Dialdehyde Cellulose-Desferrioxamine Microcarrier by Gamma Scintigraphy (2017), **Priyanka Tyagi**, Amit Kumar, Harpal Singh, *Indian journal of Science & Technology*, 10(30), 1-8
15. Optimization, characterization and efficacy evaluation of 2% Chitosan Scaffold for Tissue Engineering and Wound Healing. Priyanka Chhabra. **Priyanka Tyagi**, Aseem Bhatnagar, Gaurav Mittal, Amit Kumar. *Journal of Pharmacy & Bioallied Sciences*. 2016, 8(4), 300-308.

16. Therapeutic advancements in management of iron overload – A review (2015), **Priyanka Tyagi**, Yougesh Kumar, Dikshi Gupta, Harpal Singh, Amit Kumar, *International Journal of Pharmacy and Pharmaceutical Sciences*, 7(8), 35-44.
17. Synthesis and Characterization of a Porous Poly (hydroxyethylmethacrylate-co-ethylene Glycol dimethacrylate)-Based Hydrogel Device for the Implantable Delivery of Insulin (2012), Amit Kumar; **Priyanka Tyagi**, Sitanshu.S.Lahiri. Harpal Singh, *Journal of Applied Polymer Science*. 126(3) 894-905.
18. Synthesis and characterization of poly (HEMA-MAA) hydrogel carrier for oral delivery of insulin (2011), **Priyanka Tyagi**, Amit Kumar, Yougesh Kumar, Sitanshu S. Lahiri, *Journal of Applied Polymer Science*. 122(3), 2004–12.

BOOK CHAPTERS

1. Raunak Dhanker, **Priyanka Tyagi**, Shashank Shivaji Kamble, Dikshi Gupta, Touseef Hussain, Chapter 12 - Advances in fungi: Rejuvenation of polluted sites, Editor(s): Vijay Kumar Sharma, Maulin P. Shah, Shobhika Parmar, Ajay Kumar, Fungi Bio-Prospects in Sustainable Agriculture, Environment and Nano-technology, Academic Press, 2021, Pages 251-275, ISBN 9780128219256, <https://doi.org/10.1016/B978-0-12-821925-6.00012-5>.
2. Raunak Dhanker, Parul Singh, Drishti Sharma, **Priyanka Tyagi**, Mithlesh Kumar, Richa Singh & Suraj Prakash. (2023). Diatom Silica a Potential Tool as Biosensors and for Biomedical Field. In: Srivastava, P., Khan, A.S., Verma, J., Dhyani, S. (eds) Insights into the World of Diatoms: From Essentials to Applications. Plant Life and Environment Dynamics. Springer, Singapore. https://doi.org/10.1007/978-981-19-5920-2_11

Orcid ID: <https://orcid.org/0000-0001-9575-3301>

Google Scholar- <https://scholar.google.com/citations?user=auyYty0AAAAJ&hl=en&authuser=2>

Scopus- <https://www.scopus.com/authid/detail.uri?authorId=55702521426>

WoS- <https://www.webofscience.com/wos/author/record/HNI-7763-2023>

Linked In Profile: <https://www.linkedin.com/in/dr-priyanka-tyagi-b7b01155/>

Conferences and Symposium

1. **FDP Attended** ‘Flow Cytometry and its applications in Cell Signaling’ held at Jaypee Institute of Information Technology, Noida, 21st July 2023.
2. **Oral Presentation** “Chitosan and Cellulose based Biomaterials for Diabetic Wound at Global Indian Young Scientists Research and Innovation Conference (GI-YSRI) 2023” organized by Global Indian Scientists and Technocrats Forum (GIST), India from 31-05-2023 to 2-06-2023.
3. **Participated in Workshop** on ‘Practices in Molecular Docking’ conducted by Bioinformatics facility, Rajiv Gandhi Centre for Biotechnology (RGCB) on 27th May’ 2022.
4. **Co-Convener** of International conference on Multidisciplinary approaches in Forensic Science (ICMAFS 2022), 13-14th Dec’ 2022, GD Goenka university, Gurgaon, India.

5. **Organizing secretary** at 'International Conference on Sustainable Cities & Communities ICSCC-2020, in collaboration with **Arizona State University, USA**, 7-8 February, 2020, GD Goenka university, Gurgaon, India.
 6. **Session Chair** at International Conference on Modern Approaches in Sciences & Technology (ICMAST 2022) held on 4th April 2022, G D Goenka University, Gurugram.
 7. **Oral Presentation** 'Synthesis of Ligand Metal Complexes as Novel Antimicrobial Strategy' International Conference on Contemporary Researches in Engineering, Science, Management & Arts (ICCRESMA) conducted on 27-29 January 2022 by Centre for Research & Training (CRT), National Foundation for Entrepreneurship Development (NFED), Coimbatore, Tamil Nadu, India.
 8. **Attended** INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE IN BIOTECH & HEALTHCARE TECH 2018, Online Virtual Conference, 1-2 Dec 2018
 9. **Oral Presentation** RECENT EMERGING TRENDS OF DEVELOPMENT IN SCIENCE, ENGINEERING & TECHNOLOGY (REDSET), GD Goenka university, Gurgaon, India, Oct 2016; "Blood Kinetics and Biodistribution Study of Dialdehyde Cellulose-Desferrioxamine Microcarrier by Gamma Scintigraphy, **Priyanka Tyagi**; Amit Kumar; Harpal Singh. [BEST PAPER AWARD]
 10. **Oral Presentation** ASIAN POLYMER ASSOCIATION (APA) INTERNATIONAL CONFERENCE- BIOMATERIALS, October 27-30, 2014. "Oxidized cellulose based Desferrioxamine chelator for iron metal decorporation", **Priyanka Tyagi**, Amit Kumar, Harpal Singh
 11. **Oral Presentation** 15TH CONFERENCE OF ASSOCIATION OF MEDICAL PHYSICISTS, 6-7th Feb 2010, "Development of copolymeric microparticles for targeted delivery of therapeutic agents", **Priyanka Tyagi**, S.S.Lahiri, Yougesh Kumar.
 12. **Oral Presentation** 15TH CONFERENCE OF ASSOCIATION OF MEDICAL PHYSICISTS, 6-7th Feb 2010, "Polymer in cancer therapy and diagnostics" **Priyanka Tyagi**, S.S.Lahiri, Yougesh Kumar.
 13. XVI NATIONAL CONFERENCE ON "BIOMATERIALS, ARTIFICIAL ORGANS, MEDICAL DIAGNOSTICS AND TISSUE ENGINEERING, 24-26 Feb 2005, **Priyanka Tyagi**
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PAST ADMINISTRATIVE EXPERIENCE

Introduced Masters and Bachelors programmes in Biochemistry, Microbiology and Biotechnology in the School of Engineering and Sciences at G D Goenka University

SERVICE CONTRIBUTIONS & ACHIEVEMENTS

Curriculum Designed at University level (GDGU)-

1. CBCS syllabus of B.Sc. (H) Biotechnology and Microbiology
2. B.Sc. (H) Biochemistry, Biotechnology and Microbiology
3. M.Sc. Biotechnology, Microbiology and Biochemistry

Administrative Responsibilities-

- Coordinator, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) Government scheme

- Coordinator, Practice School (Training and Placement of Students)
- Coordinator, Internationalization of the University
- Coordinator, Lab purchase committee and Lab maintenance
- Member, Doctoral Research Committee (DRC)
- Member, Board of Studies (BoS)
- Member, Academic Review cell

Other Contributions-

- Active participation in departmental collaborations- Rapture Biotech Pvt Ltd., Medanta hospital, Gurugram
- **Reviewer for External Syllabus** of B.Sc (Hons.) Biotechnology programme of GLA University, Mathura, U.P.
- **Organized industrial trips** for students to Central Water Commission, DRDO & FSSAI
- **Coordinated Industrial collaborations** with Rapture Biotech Pvt Ltd, Noida and Medanta Hospital, Gurugram
- **Supervised** the trainings/ internships of Master's and Bachelor's degree students

Events Organized

- **MoU** with Rapture Biotech International Ltd., Noida, Dec' 2021
- **Organized Zonal championship** (workshop partners E-Cell IIT Kharagpur and MakeIntern), 27th- 29th Dec'2021. Students selected for Zonal championship at IIT Kharagpur.
- **Organizing Secretary** of 'International conference on Sustainable Cities and Communities' (ICSCC-2020), held on 7-8th Feb 2020, **in collaboration with Arizona State University, USA.**
- **Organizing Team Member** of 'World Environment Summit 2020' held on 18-19th Jan 2020 at Vallabhbai Chest Institute, Delhi University
- **Organized talk on 'Bio entrepreneurship as career opportunity and Role of start-ups and Bio incubators in Bio entrepreneurship'** on 3rd Feb 2020, in collaboration with **BSC BioNEST, RCB, Haryana.**
- Involved in regular organization of SDPs for students
- **Member of Technical Review committee of ICMMM 2019 conference, Boston USA** (12-14 Oct 2019) and reviewed 5 papers
- **Member of organizing committee of "DST INSPIRE camp"** organized by G D Goenka University in 2017. Conducted Lab visits of participants to various School of Engineering laboratories.
- **Member of organizing committee of "G D Goenka Science Quiz"** organized by G D Goenka University in Jan' 2018. Conducted Lab visits and Career counselling sessions.
- **Organized Lab visits** during Workshop on 'Revised NAAC Accreditation Framework (NAF) and Research Proposal Writing' 30-31 May 2019
- **Delivered talks** related to motivation of students for science in various schools under 'School Connect Programme' and organized visit of students from various government colleges to GD Goenka University

Workshops & Events

- February, 2018 **Student Project Exhibition on Engineering Design (SPEED)**
Guided student project entitled
- “Liposome based Formulation for Concomitant Delivery of Oxygen and Vasodilator for Treatment of Frostbite: A Proposal’
 - “Coordination chemistry of alkylamine- appended carboxylate ligands”.
- February 11-14, 2016 **Workshop for Handling and Care of Laboratory Animals**, organized by Cancer Research & Care Academy, School of Life Sciences, JNU, New Delhi
Awarded “Certificate of Competence”
- December 1-4, 2015 **QIP short term course on “Trends in Harnessing Food Safety and Quality: Indian Perspective”**, CRDT, IIT-Delhi, New Delhi
- Sept 30-Oct 1, 2015 **ACS Campus Event** at IIT-Delhi
- April 2015 **OPEN HOUSE held at IIT-Delhi** “Development of PLA based nanoparticles”
- March 24-27, 2015 **NATIONAL WORKSHOP ON BIOINFORMATICS TOOLS FOR BIOMEDICAL RESEARCH**, held at National Institute of Pathology (ICMR), Safdarjung Hospital Campus, New Delhi

POST GRADUATE TRAINING

May 2003-June 2003 - *M.S. UNIVERSITY OF BARODA, Vadodara, Gujarat* “Biodiversity of Jute Retting Environment by 16S rDNA Analysis” **Advisor: Prof. B. B. Chattoo** (Dean, Dept. of Microbiology and Biotechnology)

Jan 2004-June-2004 - *BANASTHALI VIDYAPITH, Rajasthan, India* “Molecular phylogenetic analysis of 16S rDNA: A Bioinformatics Approach” **Advisor: Dr. Vinay Sharma** (Head, Dept. of Bioscience & Biotechnology)

AWARDS AND HONORS

- Qualified ICAR-NET 2010
- Qualified DBT-JRF in Biotechnology and Applied Sciences- 2004
- Qualified GATE-2005
- Merit Scholar Certificate (M.Sc. Biotechnology)
- BEST PAPER AWARD (2016) In REDSET Conference Held at G D Goenka University