L.A.D. & Smt. R.P. College for Women, Nagpur

FACULTY PROFILE

❖ Basic Information

- **Name:** Dr. Raksha Pandit
- **Designation:** Assistant Professor
- **Department:** Biotechnology
- **Area of Specialization:** Biotechnology, Microbiology
- **VIDWAN ID-** https://researchid.co/raksha19
- **ORCID ID -** 0009-0005-7713-1388
- **Google Scholar ID-** rBo44nUAAAAJ

❖ Educational Qualifications: M.Sc ; Ph.D (Biotechnology); B.Ed

❖ Teaching Experience: 06

- **Total Teaching Experience:** 7.5 Years

❖ Research Publications

(A) Research Papers in National/ International **Journals**

- Rai M, Ingle A, **Pandit R**, Paralikar P, Anasane N, Dos Santos CA (2020) Curcumin and curcumin-loaded nanoparticles: antipathogenic and antiparasitic activities. Expert review of anti-infective therapy 18 367-379.
- Rai M, Bonde S, Yadav A, Plekhanova Y, Reshetilov A, Gupta I, Golińska P, **Pandit R** (2020) Nanotechnology-based promising strategies for the management of COVID-19: current development and constraints Expert review of anti-infective therapy 1-10.
- dos Santos CA, dos Santos GR, Soeiro VS, dos Santos JR, de Araujo Rebelo M, Chaud MV, Gerenutti M, Grotto D, **Pandit R**, Rai M, Jozala AF (2018) Bacterial nanocellulose membranes combined with nisin: a strategy to prevent microbial growth. Cellulose 25(11): 6681-6686
- Rai M, Ingle AP, **Pandit R**, Paralikar P, Biswas JK, da Silva SS (2018) Emerging role of nanobiocatalysts in hydrolysis of lignocellulosic biomass leading to sustainable bioethanol production. Catalysis Review DOI: 10.1080/01614940.2018.1479503
- Rai MK, Ingle AP, Gupta I, **Pandit R,** Paralikar P, Gade A, Chaud MV, dos Santos CA (2018) Smart nanopackaging for the enhancement of food shelf life Environ Chem Lett DOI: 10.1007/s10311-018-0794-8.
- Rai M, Ingle AP, **Pandit R**, Paralikar P, Shende S, Gupta IR, Bisws JK, da Silva SS (2018) Copper and copper nanoparticles:Role in management of insect-pests and pathogenic microbes. Nanotechnol Review DOI: 10.1515/ntrev-2018-0031.
- **Pandit R**, Gaikwad S, Rai M (2017) Biogenic fabrication of CuNPs, Cu bioconjugates and its in vitro assessment of antimicrobial and antioxidant activity. IET Nanobiotechnology 11(5):568-575
- **Pandit R**, Rai M, Santos C (2017) Enhanced antimicrobial activity of the food-protecting nisin peptide by bioconjugation with silver nanoparticles. Environment Chemistry Letters 15(3): 443-452
- Rai M, Ingle A, **Pandit R,** Paralikar P, Gupta I, Chaud M, Santos C (2017) Broadning the spectrum of small molecule antibacterials by metallic nanoparticles to overcome microbial resistance. International Journal of Pharmaceutics 532(1): 139-148

- Ingle A, Rathod J, **Pandit R**, da silva SS, Rai M (2017) Comparative evaluation of free and immobilized cellulase for enzymatic hydrolysis of lignocellulosic biomass for sustainable bioethanol production. Cellulose 24(12): 5529-5540
- Suryavanshi P, **Pandit R**, Derrita M, Zacchino S, Gade A, Rai M (2017) Collectotrichum spp. mediated synthesis of sulphur and aluminium oxide nanoparticles and its in vitro activity against food spoilage microorganisms. LWT Food Science and Technology, 81: 188-194
- Alves TF, Chaud MV, Grotto D, Jozala AF, dos Santos CA, **Pandit R**, Rai M (2017) Association of silver nanoparticles and curcumin solid dispersion: antimicrobial and antioxidant properties. AAPS Pharmaceutic Science Technology DOI: 10.1208/s12249-017-0832-z
- Tiwari N, **Pandit R,** Gaikwad S, Gade A, Rai M (2017) Biosynthesis of zinc oxide nanoparticles by petals extract of Rosa indica L., its formulation as nail paint causing onchomycosis IET Nanobiotechnology, 11(2): 205-211
- Rai M, **Pandit R**, Gaikwad S, Yadav A, Gade A (2015) Potential applications of curcumin and curcumin nanoparticles: from traditional therapeutics to modern nanomedicine. Nanotechnology Reviews 4(2): 161-172
- Rai M, **Pandit R**, Gaikwad S (2016) Antimicrobial peptides as natural bio-preservative to enhance the shelf-life of food. Journal of Food Science and Technology, 53(9): 3381-3394
- Pandit R, Gaikwad S, Agarkar G, Gade A, Rai M (2015) Curcumin nanoparticles: physico-chemical fabrication and its in vitro efficacy against human pathogens. 3 Biotech 5(6): 991-997
- Pandit R (2015) Green synthesis of silver nanoparticles from seed extract of Brassica nigra and its antibacterial activity. Nusantara Bioscience 7(1): 15-19.

(B) Books / Book Chapters

- Ingle A. P., Shende S, Gupta I, Nagaonkar D , **Pandit R,** Paralikar P, Rai M (2018) Metal nanoparticles in management of diseases of the central nervous system. In: The microbiology of central nervous system infections, Elsevier, 81-98.
- Sinitsyna SV, Paralikar P, **Pandit R**, Rai M (2018) Platinum in biomedical applications In: Biological applications of metals, Rai M., Ingle A., Medici S. (eds) Springer, Cham 151-165.
- Ingle A P, Paralikar P, **Pandit R**, Anasane N, Gupta I, Rai M, Chaud MV dos Santos CA(2017) Nanoformulations for Wound Infections In: Nanotechnology Applied to Pharmaceutical Technology, Rai M., Alves dos Santos C. (eds) Nanotechnology Applied To Pharmaceutical Technology. Springer, Cham 223-246.
- Rai M, Gade A, Ingle AP, Gupta I, **Pandit R**, Dos Santos CA(2018) Nanotoxicity to Agroecosystem: Impact on soil and Agriculture In: Emerging Trends in Agrinanotechnology : Fundamental and Applied Science Singh HB, Mishra S, Fraceto LF, de Lima R (Eds.) CABI International USA, 102.
- Rai MK, Ingle AP, **Pandit R**, Paralikar P, Rehman F, Anasane N, Ingle P and S. Buxy (2018). Curcuma longa L.: From ethnomedicinal to novel biomedical applications, In: Ethnobotany: Application of Medicinal Plants, Martinez JL , Munroz-Acevedo A, Rai M (Eds), CRC press USA, pp 136-155
- Rai M, **Pandit R**, Paralikar P, Nagaonkar D, Rehman F, dos Santos C A (2017) Pharmaceutical applications of curcumin-loaded nanoparticles. In: Nanotechnology

applied to pharmaceutical technology, M. Rai and C. Alves dos Santos (eds.), Springer International Publishing AG 139-154.

- Rai M, Ingle AP, **Pandit R**, Paralikar P, Gupta I, Anasane N, Dolenc-Voljč M (2017) Nanotechnology for the treatment of fungal infections on human skin In: The Microbiology of Skin, Soft Tissue, Bone and Joint Infections, Kon K, Rai M (Eds.) Elsevier, 169-184.
- Gupta I, Ingle A, Paralikar P, **Pandit R**, da Silva SS, Rai M(2017) Bio-distribution and Toxicity of noble metal nanoparticles in humans In: Metal Nanoparticles in Pharma, Rai M, Shegokar R (Eds.) Springer, Cham, 469-462.
- Quereshi S, Paralikar P, **Pandit R**, Razzaghi-Abyaneh M, Kon K, Rai M (2016) Pulmonary aspergillosis: diagnosis and treatment In: The microbiology of respiratory system infections, Kon K, Rai M (Eds.) Elsevier, 167-183.
- Ingle AP, Shende S, **Pandit R**, Paralikar P, Tikar S, Kon K, Rai M(2017) Nanotechnological applications for the control of pulmonary infections In: The Microbiology of Respiratory System Infections , Kon K, Rai M (Eds.) Elsevier, 223-235.
- Fernandes Antunes FA, Gaikwad S, Ingle AP, **Pandit R**, dos Santos JC, Rai M, da Silva SS (2017) Bioenergy and Biofuels: Nanotechnological Solutions for Sustainable Production In: Nanotechnology for Bioenergy and Biofuel Production Rai M, S.S. da Silva (eds.) Springer International Publishing AG, 1-18.
- **Pandit R** (2021) Biocompatible polymers impregnated with nisin and nanoparticles for food preservation. - Biopolymer-Based Nano Films Elsevier

❖ Orientation / Refresher Courses / FDPs Attended

- Completed One hour FDP on Flipped Classroom-An effective Pedagogy was completed on 13th April 2020 organized by Vellalar College for women, Erode in collaboration with L.A.D& Smt R.P College, Shankar Nagar, Nagpur.
- One week FDP inclusive quality Initiatives for higher education from 27th April to 4th May 2020 conducted by Interstate cluster of colleges webinar series.
- Participated in National Webinar on "Innovation and IPR (New IPR-2025) organized by IQAC, Jagat Arts, Commerce & I.H.P Science College, Goregaon dated on 4th March 2025.
- Completed the "NEP 2020 Orientation and Sensitization Programme'' under Malviya Mission Teacher Training Program of University Grant Commission organized by UGC-Malviya Mission Teacher training Centre RTMNU Nagpur from 16th March 2025 to 30th March 2025.

❖ Papers Presented in Conferences / Seminars

- Raksha Pandit, Mahendra Rai "Green synthesis of silver nanoparticles and its efficacy against selected bacteria" National seminar on applications of

Nanobiotechnology, SGB Amravati University, Amravati, Maharashtra on 16th March 2015

- Raksha Pandit, Mahendra Rai "Nanoformulated curcumin nanoparticles based cream" International Conference on Nanoscience Nanotechnology and Advanced Materials on 14th-17th December,Vishakhapatnam, 2015
- Raksha Pandit, Mahendra Rai "Copper nanoparticles as antimicrobial agent against food spoilage microorganisms" International Conference on Nanoscience and Technology on 29th February – 2nd March, IISER Pune, 2016
- Raksha Pandit and Mahendra Rai (2017) "Copper nanoparticles potent antimicrobial agent against food spoilage microorganisms" National conference on "Recent trends in Biotechnology and Biodiversity" on 22nd -23rd September, 2017 at Shivaji College, Amravati, Maharashtra, India.
- Raksha Pandit and Mahendra Rai (2018) International Conference on "Bioconjugation of silver nanoparticles with nisin as an antimicrobial agent", International conference on "Recent Trends in Science & Technology" on 22nd - 23rd March 2018, S.S.S.K.R Innani College, Karanja (Lad), Maharashtra, India.

❖ Awards / Recognitions

- DST INSPIRE fellowship for pursuing Ph.D in Biotechnology