

Bhoomika Yadav

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EDUCATION

Institut National de la Recherche Scientifique (INRS)

PhD candidate in Water Sciences

Quebec city, Canada

Jan 2019-Present

Amity University

B.Tech- M.Tech (Dual degree) in Biotechnology, CGPA- 9.27/10

Rajasthan, India

2013-2018

RESEARCH EXPERIENCE

Institut National de la Recherche Scientifique (INRS)

PhD Researcher

Jan 2019-Present

- Working on the value-added products recovery and wastewater stream recycling in context with circular bioeconomy
- Worked on the production and characterisation of extracellular polymeric substances using wastes
- Presented work results at departmental seminars and international conferences ranging from 10-50 people
- Drafted several papers and book chapters as first author
- Edited, redrafted and commented on working papers of other PhD and masters' students
- Collaborated with an industry, postdocs, research associates and other PhD students

National Center for Microbial Resource, NCCS, Pune, India

Master's Researcher

Jan-June 2018

- Led field collection and isolation of strains from influent and effluent of wastewater treatment plant, Pune
- Conducted identification of strains using MALDI-TOF MS and 16S rRNA gene sequencing
- Constructed phylogenetic trees on data sets using MEGA-6 software
- Analysed the antibiotic resistance profiling of effluent and influent bacterial population
- Published the results in a microbiology journal and presented in front of 50+ researchers

Parag Milk Foods Pvt. Ltd., Pune, India

Summer Undergraduate Industrial Internship

June-July 2016

- Conducted the sampling and testing of raw and processed milk
- Handled the manufacturing section of cheddar and mozzarella cheese
- Directed several tests for the quality control of milk and milk products like butter, ghee, curd, cheese

Gokuldas Hospital Pvt. Ltd, Indore, India

Summer Undergraduate Researcher

June-July 2015

- Researched the effect of pre-analytical variables on the efficacy of a pathology lab
- Learned and assisted technicians for sample collection (blood, urine, sputum) for pathological diseases.
- Compiled and analysed 100+ datasets and reports of patients from laboratory

LEADERSHIP EXPERIENCE

Amity University, Rajasthan, India

2013-2018

Department Representative

- Mentored 10 students on exploring career opportunities, balancing between work-life and setting development goals.
- Led the Cultural and Stage Committee in organizing National conference on ‘Impact of Climate Change on Air Quality, Biodiversity and Agriculture’ (ICBA 2016)
- Assisted the Cultural Programme committee in the 7th Meeting on Climate Change Programme of Department of Science and technology, Government of India, 2014

Representative and member of National Service Scheme (NSS) and NGO-UMEED

- Was selected in top 200 individuals from all over the country to participate in NSS Republic Day Parade Camp, New Delhi from January 1- 31, 2016.
- Met with the honourable President, Vice-President and Prime Minister of India and discussed about the major problems prevailing in India
- Organized several health camps, cloth donation campaigns, street plays, awareness rallies, and education classes for children and women

ACHIEVEMENTS

- Selected in FONCER TEDGIEER scholarship programme (2019-2021)
- Awarded (2019) Gold medalist- B.Tech+ M.Tech Biotechnology from Amity University Rajasthan with overall 9.27/10 CGPA
- Received State Award (Rajasthan) in 2016 from Government of Rajasthan for representing Rajasthan in Republic Day Parade 2016, New Delhi – NSS contingent
- Won 2nd prize in Oral presentation in ICFAIINFERNO’14 National technical fest at The ICFAI University, Jaipur held from 27th Feb to 1st March 2014
- Was amongst the top rank holders of 2012 Science batch of St. Edmund’s School, Jaipur

PAPER PUBLICATIONS

- **Yadav, B.**, Pandey, A., Kumar, L. R., & Tyagi, R. D. (2019). Bioconversion of waste (water)/residues to bioplastics-A circular bioeconomy approach. *Bioresource Technology*, 122584.
- Nimonkar, Y.S., **Yadav, B.**, Talreja, P., Sharma, A., Patil, S., Saware, S.S., Ranade, D.R. and Prakash, O. (2019). Assessment of the Role of Wastewater Treatment Plant in Spread of Antibiotic Resistance and Bacterial Pathogens. *Indian Journal of Microbiology*, 59(3), pp.261-265.

CONFERENCE AND WORKSHOPS

- **Bhoomika Yadav**, S.K. Yellapu, R.D. Tyagi (2019). Oral presentation on “Characterization of extracellular polymeric substances using wastewater sludge with crude glycerol from different biodiesel companies” at CAWQ “33rd Eastern Canadian Symposium on Water Quality Research” at Concordia University, Montreal on 25-26th Oct, 2019.
- **Bhoomika Yadav**, R.D. Tyagi (2019). Oral presentation on “Greenhouse gases: Quantification and reduction during wastewater treatment” for the summer school organized by CREATE FONCER TEDGIEER from 3rd- 21st June, 2019

- **Bhoomika Yadav**, Manishita Das Mukherji (2014). Oral presentation on “Spirulina: The world’s healthiest food” in ICFAIINFerno’14, National technical fest organized by The ICFAI University, Jaipur held from 27th Feb to 1st March 2014.
- **Bhoomika Yadav**, Riddhi Sharma, A.N. Pathak (2014). Poster presentation on “Nuclear espionage: A foreshadowing threat” in three days National Conference on “Earth and environmental: Pollution and prevention (EEEEP- 2014)” organized by Amity University Uttar Pradesh, Noida in association with Ministry of Earth Sciences, New Delhi on January 28-30, 2014.
- Participated in National workshop on “Emotional Literacy” conducted by Dr. Dean Van Leuven, World Emotional Literacy League, USA at Amity University Rajasthan, Jaipur on September 23-24, 2016.
- Attended Workshop and International Symposium on “Targeted Proteomics” organized by IIT Bombay, Mumbai on December 13- 14, 2015.
- Participated in National Conference on “Geographical Indications-Application Filing and Awareness Program” organized in collaboration with Department of Science and Technology, Govt. of Rajasthan at Amity University Rajasthan, Jaipur on March 24-25, 2014.

BOOK CHAPTERS

- **Bhoomika Yadav**, Aishwarya Pandey and R.D. Tyagi (2020). “Polyhydroxyalkanoates production from feedstocks: technological advancements and techno-economic analysis in reference to circular bioeconomy”, Book- Circular Bioeconomy, in the series of *Current Developments and Future Outlook*, Elsevier (submitted for publication).
- **Bhoomika Yadav**, Anusha Atmakuri, Shraddha Chavan and R.D. Tyagi (2020). “Role of bioeconomy in circular economy”, Book- Circular Bioeconomy, in the series of *Current Developments and Future Outlook*, Elsevier (submitted for publication).
- Lalit R Kumar, **Bhoomika Yadav**, Sravan K. Yellapu, Sameer Pokhrel, Rajwinder Kaur, Aishwarya Pandey and RD Tyagi (2020). “Process development, challenges and commercialization of biopolymers”, Book- Biodegradable polymers and composites- Process engineering to commercialization in the series of *Biomass, Biofuels, Biochemicals* (submitted for publication).
- **Bhoomika Yadav**, Bala Sellamuthu, R.D. Tyagi (2019) “Degradation of micro-pollutants by ultra-violet radiation”, Book- Emerging Organic Micro-pollutants in the series of *Current Developments in Biotechnology and Bioengineering*, Elsevier (accepted for publication).
- **Bhoomika Yadav**, Bala Sellamuthu, R.D. Tyagi (2019) “Riboswitches and Aptamers- Potential future targets to control drug-resistant bacteria”, Book- Microbiology and Treatment of Hospital Wastewater in the series of *Current Developments in Biotechnology and Bioengineering*, Elsevier (accepted for publication).
- Rajwinder Kaur, **Bhoomika Yadav**, R.D. Tyagi (2019) “Microbiology of hospital wastewater”, Book- Microbiology and Treatment of Hospital Wastewater in the series of *Current Developments in Biotechnology and Bioengineering*, Elsevier (accepted for publication).
- **Bhoomika Yadav**, Bala Sellamuthu, R.D. Tyagi (2019) “Development of molecular tools to control emerging drug resistance pathogens”, Book- Microbiology and Treatment of Hospital Wastewater in the series of *Current Developments in Biotechnology and Bioengineering*, Elsevier (accepted for publication).
- **Bhoomika Yadav**, Carlos Saul Osorio González, B. Sellamuthu, R.D. Tyagi (2019) “Pharmaceuticals role in microbial evolution”, Book- Microbiology and Treatment of Hospital Wastewater in the series of *Current Developments in Biotechnology and Bioengineering*, Elsevier (accepted for publication).

- **Bhoomika Yadav**, Ashutosh K Pandey, Lalit R Kumar, Rajwinder Kaur, Sravan K Yellapu, B. Sellamuthu, R.D. Tyagi and Patrick Drogui (2019) “Introduction to wastewater microbiology- Special emphasis on hospital wastewater”, Book- Microbiology and Treatment of Hospital Wastewater in the series of *Current Developments in Biotechnology and Bioengineering*, Elsevier (accepted for publication).
- Anita Talan, **Bhoomika Yadav**, L.R. Kumar, R.D. Tyagi (2019) “Resilience Engineering and Quantification for Sustainable Systems” by McGraw Hill Publishers (accepted for publication).

AREAS OF INTEREST

Biomass, biopolymers, value-added products, wastewater treatment, circular bio-economy.

SKILLS AND INTERESTS

Laboratory: Chromatography, PCR, MALDI-TOF MS, 16S rRNA sequencing, fermenters

Programming languages: C, C++, Data Structure and Algorithm

Application program: Schrodinger, Autodock, Pymol, MS Office

Database search and software: PubMed, PDB, NCBI, Expasy, EZbiocloud, MEGA 7.0

Languages: English, Hindi, German (beginner), French (beginner)

Interests: Sketching, dancing, reading, blogging.

27th January 2020