NAME	**Preeti Mehta Kakkar**	
DESIGNATION	Assistant Professor III	
EMAIL ID	pmkakkar@amity.edu	
CONTACT NUMBER	7009897422	
RESEARCH INTERESTS	Nutraceuticals, biofuels, circular economy and carbon sequestration and utilization, biochemicals from biowaste	

EDUCATIONAL QUALIFICATIONS:

Name of College / University	Degree	Year
Himachal Pradesh University, Shimla	Bachelor in Science (Biotechnology)	2005
Dr YS Parmar University of Horticulture and Forestry, Solan, H.P.	Masters in Microbiology	2008
Dr YS Parmar University of Horticulture and Forestry, Solan, H.P.	Doctorate in Microbiology	2012

Title of Ph.D. thesis: Diversity and function of Phosphate solubilizing rhizobacteria associate with apple seedlings

EXPERIENCE (in chronological order): Total 10 Years Research & Teaching

Designation	Type of post held (teaching/ research)	Name of the Institute	Year (From – To)
Sr.Scientific Officer	Research and Development	DBT-IOC Centre, Indian Oil Corporation Limited	2013-2023
Assistant Professor III	Research and Teaching	Amity University	2023-present

No. of M.Tech. Students supervised:	5 (Awarded)
No. of B.Tech. Students supervised:	8 (Awarded)

PUBLICATIONS
(28)

1. Anu Chaudhary, Ranju Kumari Rathour, Preeti Solanki, **Preeti Mehta Kakkar**, Shruti Pathania, Abhishek Walia, Rama Raju Baadhe, Ravi Kant Bhatia. 2025. Recent technological advancements in biomass conversion to biofuels and bioenergy for circular economy roadmap, Renewable Energy, 244,122714.

2. Sharma, T., Das, N., Mehta Kakkar, P., Mohapatra, R. K., Pamidimarri, S., Singh, R. K., … Nayak, M. (2025). Microalgae as an emerging alternative raw material of docosahexaenoic acid and eicosapentaenoic acid – a review. *Critical Reviews in Food Science and*

Nutrition, 1–20.

3. **Mehta Preeti**, Rani Rekha, Gupta Ravi. Mathur A.S. and Ramakumar SSV. 2023. Simultaneous production of high value lipids in *Schizochytrium sp.* by synergism of chemical modulators. Applied Journal of Microbiology and Biotechnology . **107**, 6135–6149.

4. **Mehta Preeti**, Rani Rekha, Gupta Ravi. Mathur A.S. and Puri Suresh. 2022. Synergistic integration of wastewaters from second generation ethanol plant for algal biofuel production: An Industrially relevant option. 3 Biotech.12:34

5. **Mehta Preeti**, Brent A. Jackson , Emeka G. Nwoba , Ashiwin Vadiveloo , Parisa A. Bahri, Anshu S. Mathur, Navid R. Moheimani. 2019. Continuous non-destructive hydrocarbon extraction from *Botryococcus braunii* BOT-21. Algal Research .41: 101537

6. **Mehta Preeti**, Rani Rekha, Gupta Ravi, Mathur A.S. and Puri Suresh.2018. Biomass and Lipid production of a novel freshwater thermo-tolerant mutant strain of *Chlorella pyrenoidosa* NCIM 2738 in seawater salinity recycled medium. Algal Research. 36:88-95

7. Singh Dilip, **Mehta Preeti**, Saxena Rohit, Barrow Colin, Puri Munish, Tuli Deepak K., Mathur Anshu S. Development of continuous cultivation process for oil production through bioconversion of minimally treated waste streams from second generation bioethanol production. Journal of Chemical Technology and Biotechnology. *93 (10): 3018-3027*

8. **Mehta Preeti**, Walia Abhishek and Shirkot CK. 2015. Functional Diversity of Phosphate Solubilizing Plant Growth Promoting Rhizobacteria Isolated from Apple Trees in the Trans Himalayan Region of Himachal Pradesh, India. *Biological Agriculture & Horticulture*. DOI: 10.1080/01448765.2015.1014420.

9. **Mehta Preeti**, Walia Abhishek, Kakkar Nitin and Shirkot CK. 2014. Tricalcium phosphate solubilisation by new endophyte *Bacillus methylotrophicus* CKAM isolated from apple root endosphere and its plant growth-promoting activities. *Acta Physiologiae Plantarum.* **36**: 2033-2045.

10. **Mehta Preeti**, Walia Abhishek**,** Chauhan Anjali, Kulshrestha Saurabh and Shirkot C.K. 2013. Phosphate solubilization and plant growth promoting potential by stress tolerant *Bacillus* sp. isolated from rhizosphere of apple orchards in trans Himalayan region of Himachal Pradesh. *Annals of Applied Biology*.**163**: 430-443

11. **Mehta Preeti**, Walia Abhishek**,** Chauhan Anjali, Shirkot CK. 2013. Plant growth promoting traits of phosphate-solubilizing rhizobacteria isolated from apple trees in trans Himalayan region of Himachal Pradesh. *Archives of Microbiology*. **195**: 357-369. DOI: 10.1007/s00203-013-0881-y.

12. **Mehta Preeti**, Walia Abhishek, Kulshrestha Saurabh, Chauhan Anjali and Shirkot CK. 2013.Efficiency of plant growth-promoting P-solubilizing *Bacillus circulans* CB7 for enhancement of tomato growth under net house condition. *Journal of Basic Microbiology*. **53**: 1–12. DOI 10.1002/jobm.201300562.

13. **Mehta Preeti**, Chauhan Anjali, Mahajan Rishi, Mahajan P.K. and Shirkot C. K. 2010. Strain of *Bacillus circulans* isolated from apple rhizosphere showing plant growth promoting potential. ***Current Science*** **98**(4):538-542

14. **Mehta Preeti**, Walia Abhishek**,** Chauhan Anjali and Shirkot CK. 2011. Accelerated Solubilization of Inorganic Phosphate and Production of Antifungal Activity in Soil by Plant Growth Promoting Rhizobacteria Isolated from Apple Rhizosphere. *Journal of Mycology and Plant Pathology* **41**(3): 342-349.

15. Walia, A.,Guleria,S.,**Mehta,P.**et al.,2017.Microbial xylanases and their industrial application in pulp and paper biobleaching:A review.3 Biotech 7,11

16. Walia Abhishek, **Mehta Preeti**, Chauhan Anjali and Shirkot C.K. 2013. Optimization of cellulase-free xylanase production by alkalophilic *Cellulosimicrobium* sp. CKMX1 in solid-state fermentation of apple pomace using central composite design and response surface methodology. *Annals of Microbiology*. **63**:187-198.

	17. Walia Abhishek, **Mehta Preeti**, Chauhan Anjali, KulshresthaSaurabh and Shirkot C.K. 2014. Purification and characterization of cellulase-free low molecular weight endo β-1, 4 xylanase from an alkalophilic *Cellulosimicrobium cellulans* CKMX1 isolated from mushroom compost. *World Journal of Microbiology and Biotechnology*. **30**: 2597-2608. **18.** Walia Abhishek, **Mehta Preeti**, Guleria Shiwani and Shirkot CK. 2015. Improvement for enhanced xylanase production by *Cellulosimicrobium cellulans* CKMX1 using Central Composite Design of Response Surface Methodology and its application in biobleaching. *3Biotech*. DOI: 10.1007/s13205-015-0309-2 **19.** Walia Abhishek, **Mehta Preeti**, Guleria Shiwani and Shirkot CK. 2015. Modification in the properties of paper by using cellulase-free xylanase in pulp biobleaching produced from *Cellulosimicrobium cellulans* CKMX1 isolated from mushroom compost. *Canadian Journal of Microbiology*. DOI: 10.1139/cjm-2015-0178 **20.** Walia Abhishek, **Mehta Preeti**, Chauhan Anjali and Shirkot C.K. 2014. Effect of *Bacillus* sp. strain CKT1 as inoculum on growth of tomato seedlings under net house conditions. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*. **84**(1):144-155. DOI 10.1007/s40011-013-0189-3. **21.** Walia Abhishek, **Mehta Preeti**, Chauhan Anjali and Shirkot C.K. 2013. Antagonistic activity of plant growth promoting rhizobacteria isolated from tomato rhizosphere against soil borne fungal plant pathogens. *International Journal of Agriculture, Environment and Biotechnology*. **6(4)**: 587-595. **22.** Walia Abhishek, **Mehta Preeti**, Chauhan Anjali and Shirkot C.K. 2013. Production of alkalophilic xylanases by *Paenibacillus polymyxa* CKWX1 isolated from decomposing wood. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences.* **83(2)**: 215-223. DOI 10.1007/s40011-012-0122-1. **23.** Walia Abhishek, **Mehta Preeti**, Guleria Shiwani, Chauhan Anjali and Shirkot CK. 2014. Impact of fungicide mancozeb at different application rates on

soil microbial populations, soil biological processes and enzyme activities in soil. *The Scientific World Journal*. Volume 2014.Article ID 702909, 9 pages. DOI: 10.1155/2014/702909

24. Walia Abhishek, **Mehta Preeti**, Guleria Shiwani,Chauhan Anjali and Shirkot CK. 2015. Molecular cloning and sequencing of alkalophilic Cellulosimicrobium cellulans CKMX1 xylanase gene and charachetrization of gene product. Brazilian Archives of Biology and Technology. 58 (6): 913-922

25. Chauhan Anjali, Guleria Shiwani, Balgir Praveen P., Walia Abhishek, Mahajan Rishi, Mehta **Preeti** , Chand Karan Shirkot. 2017. Tricalcium phosphate solubilization and nitrogen fixation by newly isolated *Aneurinibacillus aneurinilyticus* CKMV1 from rhizosphere of *Valeriana jatamansi* and its growth promotional effect. Brazilian Journal of Microbiology. 48, (2): 294–304

26. Kumar Anil, Guleria Shiwani, **Mehta Preeti**, Walia Abhishek, Chauhan Anjali, and Shirkot CK. 2015. Plant growth promoting traits of Phosphate solubilizing rhizobacteria isolated from seabuckthorn growing in cold desert region of trans-Himalayas and evaluating their potential on growth of tomato seedlings. *Acta Physiologia Plantarum.* 37(3):37:48

27. Chandel S, Sharma IM and **Mehta Preeti**. 2011. Marigold (*Tagetes erecta* L) - a new host record of *Ralstonia solanacearum* (Smith) Yabuuchi et al. *Journal of Mycology and Plant Pathology* 41(4):629-630.

28. Kansal S, Dohroo NP, **Mehta Preeti** and Ahluwalia Neha. 2011. Evaluation of anti-pythiaceous fungicides against *Pythium aphanidermatum* causing soft rot of ginger. *Plant Disease Research* 25(2):119-125

29. Dohroo NP, Kansal S, **Mehta Preeti** and Ahluwalia Neha. 2012. Evaluation of eco-friendly disease management practices against soft rot of ginger caused by *Pythium aphanidermatum*. *Plant Disease Research* 27(1):1-Kaur Mohinder, Chandel Sunita and **Mehta Preeti**. 2011. Evaluation of rhizospheric fungi and extract of Melissa officinalis for antimicrobial and proteolytic activities. *International journal of Plant*

	Protection.4(1):161-169 **30.** Chauhan Anjali, **Mehta Preeti**, Mahajan Rishi, Walia Abhishek and Shirkot C.K. 2011. Deodar (*Cedrus deodara*) wood dust: An alternative substrate for amylase production in solid state fermentation by alkalophilic *Bacillus* spp. A1 isolated from mushroom compost. *Asian Journal of Biosciences*. 6(1&2) : 41-47
PATENTS ***(granted -3 Filed-10.)***	**Details of International Patent** 1. Mathur AS, Singh Dilip, **Mehta Preeti**. Gupta R., Tuli D.K. 2018. "Thraustochytrid based processing of waste effluents in US 9,890,402B2 **(Granted)** **2.** Mathur AS, Singh Dilip, **Mehta Preeti**. Gupta R., Tuli D.K. 2018. "Thraustochytrid based processing of 3. waste effluents in Japan JP6258983B2 **(Granted).** 3. Mathur AS, Singh Dilip, **Mehta Preeti**. Gupta R., Tuli D.K. 2018. "Thraustochytrid based processing of waste effluents in Europe EP 3 098 318 A1 (**Granted)** 4. Mathur AS, **Mehta Preeti**., Gupta R., Ramakumar S S V, Rani Rekha , Kandpal A, Puri S.K. 2022. An Improved Process for Production of Enriched Algal Biomass in USA US 17/987515 (**Granted)** **5.** Mathur AS, **Mehta Preeti**., Gupta R., Ramakumar S S V, Rani Rekha , Kandpal A, Puri S.K. 2022. An Improved Process for Production of Enriched Algal Biomass in Europe EP 22206406.5 **(Filed)** 6. Mathur AS, **Mehta Preeti**., Gupta R., Ramakumar S S V, Rani Rekha , Kandpal A, Puri S.K. 2022. An Improved Process for Production of Enriched Algal Biomass in Japan JP 2022-182096 **(Filed)** **7.** Mathur AS, **Mehta Preeti**., Gupta R., Ramakumar S S V, Rani Rekha , Puri S.K. 2022. Methods and Formulations for Enhancing High Value Lipids in USA US 18/083181 **(Granted)** 8. Mathur AS, **Mehta Preeti**., Gupta R., Ramakumar S S

	V, Rani Rekha , Puri S.K. 2022. Methods and Formulations for Enhancing High Value Lipids in Europe EP 22212898.5 **(Filed)** 9. Mathur AS, **Mehta Preeti**., Gupta R., Ramakumar S S V, Rani Rekha , Kandpal A, Puri S.K. 2022. Methods and Formulations for Enhancing High Value Lipids JP 2022-200211 **(Grantd)** **Details of National patent** 1. Deepshikha Katare, **Preeti Mehta Kakkar**,Ruchi Jakhmola Mani.2024.Method for enhancing lipid production in Bacterial strain using xylose for biodiesel applications in India (Filed, Application number:202411076157) 1. Mathur AS, Singh Dilip, **Mehta Preeti**. Gupta R., Tuli D.K. 2018. "Thraustochytrid based processing of waste effluents (Granted) 2. **Preeti Mehta**, Rekha, Ankita, Mathur AS, Gupta R, Puri S.K.2021. "An improved process for production of enriched algal biomass" filed in India (Application Number:202121052370) 3. Mathur AS, **Preeti Mehta,** Rekha, Gupta R, Puri S.K. 2021. "Methods and Formulations for Enhancing High Value Lipids" filed in India (Application Number:202121058693) 4. Mathur AS, Reeza, **Preeti Mehta**, Gupta R, Puri S.K. 2021. Method for enhancing autoflocculation efficiency in algae (Patent under filing)
RESEARCH PROJECTS **Ongoing :1 (Industrial grant)**	***Details:*** 1. Lignin degrading consortia formulations for biogas production (fund granted by Harvest Securities Ltd)
AWARDS & HONOURS/ DISTINCTIONS	1. Received **2024–25 project grant** from **Council of Science & Technology, Uttar Pradesh** for guiding an engineering student research project under Engineering student's Project Grant.

	2. Key Note speaker in Future of BSBE 2024 Barcelona, Spain 3. Key Note speaker in BIOKRITI National Conference, 2024 4. Endeavour Post Doctoral Research Fellowship 2018 sponsored by Australian Govt 5. BIRAC-SRISTI Gandhian Young Technological Innovation (GYTI) Awards(2015)- for developing a novel process to commoditize carbon dioxide gas in to fuels and high value nutraceuticals at commercially viable scales 6. Hari Om Ashram Prerit Young Scientist Award 2016- for outstanding research in the field of Renewable energy 7. Petrofed Special Commendation Game changer Award 2014 –to develop a novel process to utilize carbon dioxide in to high value nutraceuticals along with biodiesel lipids 8. Best Poster presentation Award in ISFL Conference for work on development of process on utilization of seawater by adapted algal strains 9. University PhD Scholarship for departmental topper Senior research fellow in ICAR funded project 10. Scholarship for two years of Merit awarded by H.P.B.S.E. Dharmshala 11. Swami Vivekanand Scholarship after matriculate for 2 years 12. Guest Editor in Frontiers in Microbiology
MEMBERSHIP with Professional/ Academic bodies	Editorial Board/Reviewer Topic Editor in Frontiers in Microbiology Basic Microbiology (Reviewer) Frontiers in plant science (Reviewer) Clean technologies and Environmental policy (Reviewer) Bioresource technology reports (Reviewer)