

## PERSONAL INFORMATION



## Dr. Sanjeet Mehariya (Ph. D)

Phytochemistry Division, CSIR-Central Institute of Medicinal and Aromatic Plants, (CSIR-CIMAP), Lucknow, India

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European Commission

Sex Male | Date of birth 21 Sep. 1988

## WORK EXPERIENCE

- December 2024–Till date **Scientist**  
Phytochemistry Division, CSIR- Central Institute of Medicinal and Aromatic Plants, Lucknow, India  
India  
Working on various aspects of medicinal and aromatic plants (MAPs) and natural bioactive compounds for human health benefits.
- August 2024–November 2024 **Assistant Professor**  
Department of Bioscience, School of Basic Sciences, Faculty of Science, Manipal University Jaipur, India  
Worked on various aspects of microalgal biorefinery from lab to pilot scale for up-/down-stream processes to produce high-value biological products using different strains. Also, Teaching the Industrial Biotechnology, Microbiology and Bioprocess Engineering and Research & publication ethics to under-/post-graduate and PhD students, respectively.
- February 2023–April 2024 **Postdoctoral Researcher**  
Center for Sustainable Development, Qatar University, Doha, P.O. Box: 2713 Qatar  
<http://www.qu.edu.qa/about/directory?q=mehariya>  
Worked on various aspects of microalgal biorefinery from lab to pilot scale (TRL 1-8) for up-/down-stream processes to produce high-value biological products using different strains. Also, providing the solutions for sustainable development of various bioprocesses.
- February 2021–February 2023 **Postdoctoral Researcher**  
Department of Chemistry, Umeå University, Umeå, 90187 Sweden <https://www.umu.se/>  
Worked as PostDoctoral Researcher in project entitled “Development of sustainable and biobased UV filter chemicals”. Supervision of Master students and Co-supervision of PhD and Master students.
- January 2018–December 2020 **Researcher (EU-Project) / PhD Scholar**  
Department of Engineering, Università degli Studi della Campania Luigi Vanvitelli, Italy.  
<https://www.unicampania.it/>  
Worked as PhD Fellow in European project (Valuemag; <https://cordis.europa.eu/project/id/745695/results>) entitled “**Valuable Products from Algae Using new Magnetic Cultivation and Extraction Techniques**”.
- September 2016–December 2017 **Research Fellow**  
Department of Biology, Hong Kong Baptist University, Hong Kong  
<http://www.hkbu.edu.hk/eng/main/index.jsp>  
Worked as Research Fellow in project “**Fermentation at ambient- low-and high-pressure at different temperatures of food waste for production of high value products**”.

January 2015–July 2016	<b>Researcher (EU-Project)</b> ENEA- Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Rome, 00123 Italy. <a href="https://www.enea.it/en">https://www.enea.it/en</a> Worked as ENEA International Research Fellow in European project (Grail) entitled “ <b>Glycerol Biorefinry Approach for the Production of High-Quality Products of Industrial Value</b> ” ( <a href="http://www.grail-project.eu/">http://www.grail-project.eu/</a> ).
September 2011–December 2014	<b>Research Fellow (India-South Korea)</b> CSIR-Institute of Genomics and Integrative Biology, Delhi, 110007 India. <a href="http://www.igib.res.in">http://www.igib.res.in</a> Konkuk University, Seoul, South Korea Worked as a research fellow in project entitled “ <b>Bioenergy from Waste: Hydrogen and Methane Production</b> ”. Design the experiments to achieve the project objectives.

## EDUCATION AND TRAINING

January 2018–December 2020	<b>Doctor of Philosophy (PhD)</b> Department of Engineering, Università degli Studi della Campania Luigi Vanvitelli, (Italy). Thesis Title: <b>Biochemical conversion of CO<sub>2</sub> for cultivation of micro-algae and production of high value-added chemicals</b> ( <i>Award Date: 18-12-2020</i> ) <a href="#">Opponent of PhD Degree</a> .
July 2009–July 2011	<b>Master of Science (MSc) in Biotechnology</b> University of Rajasthan, Jaipur (India) <b>Master's Thesis Training</b> (1 July 2010–15 November 2010) <b>CSIR-Institute of Genomics and Integrative Biology</b> , Delhi (India). Thesis Title: Studies on Biochemical Characterization of Microbial Diversity for Biohydrogen and Bioplastic Production.
July 2006–July 2009	<b>Bachelor of science (BSc) in Biotechnology</b> University of Rajasthan, Jaipur (India) <b>Bachelor's Thesis Training</b> (15 July 2008–14 September 2008) <b>Biotech Park</b> , Lucknow (India) Thesis Title: Drug Designing for H5N1 Virus. <b>One-month Training</b> (30 July 2007–29 August 2007) <b>Jaipur Dairy</b> , Jaipur (India)

## PUBLICATION

**PUBLICATION SUMMARY: [Google Scholar Link](#); ORCID iD: [0000-0003-1801-4702](#)**

Gene-Bank Submission	Kalia, V.C., Anand, A.S., Kumar, P., and <b>Mehariya S.</b> , “16s ribosomal RNA gene, partial sequence of 16 isolates submitted to NCBI public domain,” 2014. <a href="#">Link</a>
Editorial	International Journal of Environmental Research and Public Health (IJERPH)-MPDI, Basel, Switzerland, Special Issue: Microalgae Biorefinery for Bioproducts. <a href="#">Link</a>
Books	1. Algal Biorefineries and the Circular Bioeconomy, Volume I: Algal Products and Processes, Editors: <b>Sanjeet Mehariya</b> , Shashi Kant Bhatia, Obulisamy Parthiba Karthikeyan, ISBN No.: 9781032048918. <b>Publisher:</b> Taylor & Francis, CRC Press, USA. <a href="#">Link</a>

2. Algal Biorefineries and the Circular Bioeconomy, Volume II: Industrial Applications and Future Prospects, Editors: Shashi Kant Bhatia, **Sanjeet Mehariya**, Obulisamy Parthiba Karthikeyan, ISBN No.: 9781032048932. **Publisher:** Taylor & Francis, CRC Press, USA. [Link](#)
3. Algae refinery: Up-and down-stream process, Editors: **Sanjeet Mehariya**, Pradeep Verma, ISBN No.: 9781032527888. **Publisher:** Taylor & Francis, CRC Press, USA. [Link](#)
4. Microbial biorefinery for exopolysaccharides: production, applications, and technological challenges, Editors: Shashi Kant Bhatia, Parmjit Singh Panesar, **Sanjeet Mehariya**, ISBN No.: 9781032379418. **Publisher:** Taylor & Francis, CRC Press, USA. [Link](#)
5. Algal Biorefinery: A Sustainable Solution for Environmental Applications, Editors: **Sanjeet Mehariya**, Bikash Kumar, Shashi Kant Bhatia, Obulisamy Parthiba Karthikeyan, ISBN No.: 9780443239670. **Publisher:** Elsevier, Academic Press, Netherlands. [Link](#)

### Pre-reviewed Key Articles

#### Ranking

**Q 1**

1. Udaypal, Goswami, R.K., **Mehariya, S.** and Verma, P., 2024. "Microalgae-derived tocopherols: Biotechnological advances in production and its therapeutic potentials", Sustainable Chemistry and Pharmacy, 42: 101791. [Link](#).

**Q 1**

2. **Mehariya S.**, Senthil, N.A., Thaher, M.I., AbdulQuadir, M., Khan, S., Rahmanpoor, A., kashem, A., Faisal, M., Sayadi, S., Hawari, A.H., Al-Jabri, H. and Das, P., "A comprehensive review on versatile microalga *Tetraselmis*: Potentials applications in wastewater remediation and bulk chemical production", 2024 Journal of Environmental Management, 365:121520. [Link](#).

**Q 1**

3. **Mehariya S.**, Das, P., Thaher, M.I., AbdulQuadir, M., Khan, S., Sayadi, S., Hawari, A.H. Verma, P., Bhatia, S.K., Karthikeyan, O.P., Zuurro, A. and Al-Jabri, H., "Microalgae: a relevant treatment for emerging contaminants in domestic wastewater" 2024, Chemosphere, 351:141245. [Link](#).

**Q 1**

4. Kashem, A.H.M., Das, P., **Mehariya S.**, AbdulQuadir, M., Khan, S., Thaher, M.I., Alghasal, G., Hawari, A.H. and Al-Jabri, H., "Aquaculture from Inland Fish Cultivation to Wastewater Treatment: A Review", 2023, Reviews in Environmental Science and Bio/Technology, 22, 969–1008. [Link](#).

**Q 1**

5. Goswami, R.K., **Mehariya, S.**, Karthikeyan, O.P. and Verma, P., "Valorisation of organic carbons and organo-solvents by mixotrophic cultivation of methylotrophic *Tetraselmis indica* for enhanced biomolecules production", 2023, Sustainable Chemistry and Pharmacy, 36, 101281. [Link](#)

**Q 1**

6. **Mehariya, S.**, Plöhn, M., Jablonski, P., Stagge, S., Jönsson, L. and Funk, C., "Biopolymer production from biomass produced by Nordic microalgae grown in wastewater", 2023, Bioresource Technology, 376, 128901. [Link](#)

**Q 1**

7. **Mehariya, S.**, Plöhn, M., Leon-Vaz, A., Patel, A and Funk, C., "Improving the content of high value compounds in Nordic *Desmodesmus* microalgal strains", 2022, Bioresource Technology, 359, 127445. [Link](#)

**Q 1**

8. Goswami, R.K., **Mehariya, S.** Karthikeyan, O.P. and Verma, P., "Influence of carbon sources on biomass and biomolecule accumulation in *Picochlorum* sp. cultured under the mixotrophic condition", 2022, International Journal of Environmental Research and Public Health, 19:3674. [Link](#)

**Q 2**

9. Rani, A., Saini, K.C., Bast, F., Varjani, S., **Mehariya, S\***, Bhatia, S.K., Sharma, N., Funk, C., "A review on microbial products and their perspective application as antimicrobial agents", 2021, Biomolecules, 11:1860. [Link](#)

**Q 1**

10. **Mehariya, S.**, Goswami, R.K., Karthikeyan, O.P. and Verma, P., "Microalgae for high-value products: A way towards green nutraceutical and pharmaceutical compounds", 2021, Chemosphere, 280:130553, **IF:**

8.943. [Link](#)

- Q 1** 11. **Mehariya, S.**, Fratini, F., Lavecchia, R. and Zuurro, A., "Green extraction of value-added compounds from microalgae: A short review on natural deep eutectic solvents (NaDES) and related pre-treatments", 2021, Journal of Environmental Chemical Engineering, 9:105989, [Link](#)
- Q 1** 12. Molino, A., **Mehariya, S.**, Di Sanzo, G., Larocca, V., Martino, M., Leone, G.P., Marino, T., Chianese, S., Balducchi, R. and Musmarra, D., "Recent developments in supercritical fluid extraction of bioactive compounds from microalgae: Role of key parameters, technological achievements and challenges," 2020, Journal of CO<sub>2</sub> Utilization, 36:196-209. [Link](#)
- Q 1** 13. **Mehariya, S.**, Sharma, N., Casella, P., Iovine, A., Molino, A., and Musmarra, D., "An integrated strategy for nutraceuticals from *Haematococcus pluvialis*: From cultivation to extraction", 2020, Antioxidants, 9(9):825, [Link](#)
- Q 1** 14. Casella, P., Iovine, A., **Mehariya, S.**, Marino, T., Musmarra, D., Molino, A., "Smart method for carotenoids characterization in *Haematococcus pluvialis* red phase and evaluation of astaxanthin thermal stability", 2020, Antioxidants, 9(5):422. [Link](#)
- Q 1** 15. Molino, A., **Mehariya, S.**, Iovine, A., Casella, P., Marino, T., Karatza, D., Chianese, S. and Musmarra, D., "Enhancing biomass and lutein production from *Scenedesmus almeriensis*: Effect of carbon dioxide concentration and culture medium reuse", 2020, Frontiers in Plant Science, 11:415. [Link](#)
- Q 1** 16. Molino, A., **Mehariya, S.**, Karatza, D., Chianese, S., Iovine, A., Casella, P., Marino, T. and Musmarra, D., "Bench-scale cultivation of microalgae *Scenedesmus almeriensis* for CO<sub>2</sub> capture and lutein production," 2019, Energies, 12(14):2806. [Link](#)
- Q 1** 17. Leone, G.P., Balducchi, R., **Mehariya, S.**, Martino, M., Larocca, V., Di Sanzo, G., Iovine, A., Casella, P., Marino, T., Karatza, D., Chianese, S., Musmarra, D. and Molino, A., "Selective extraction of  $\omega$ -3 fatty acids from *Nannochloropsis sp.* using supercritical CO<sub>2</sub> extraction," 2019, Molecules, 24(13):2406. [Link](#)
- Q 1** 18. Molino, A., Martino, M., Larocca, V., Di Sanzo, G., Spagnoletta, A., Marino, T., Karatza, D., Iovine, A., **Mehariya, S.** and Musmarra, D., "Eicosapentaenoic acid extraction from *Nannochloropsis gaditana* using carbon dioxide at supercritical conditions," 2019, Marine Drugs, 17(2):132. [Link](#)
- Q 1** 19. **Mehariya, S.**, Iovine, A., Di Sanzo, G., Larocca, V., Martino, M., Leone, G.P., Casella, P., Karatza, D., Marino, T., Musmarra, D. and Molino, A., "Supercritical fluid extraction of lutein from *Scenedesmus almeriensis*", 2019, Molecules, 24(7):1324, IF: 4.927. [Link](#)
- Q 1** 20. **Mehariya, S.**, Patel, A.K., Obulisamy, P.K., Punniyakotti, E. and Wong, J.W., "Co-digestion of food waste and sewage sludge for methane production: Current status and perspective," 2018, Bioresource Technology, 265:519-531. [Link](#)
- Q 1** 21. Karthikeyan, O.P., Trably, E., **Mehariya, S.**, Bernet, N., Wong, J.W. and Carrere, H., Pretreatment of food waste for methane and hydrogen recovery: A review," 2018, Bioresource Technology, 249:1025-1039, IF: 11.889. [Link](#)
- Q 1** 22. Molino, A., **Mehariya, S.**, Iovine, A., Larocca, V., Di Sanzo, G., Martino, M., Casella, P., Chianese, S. and Musmarra, D., "Extraction of astaxanthin and lutein from microalga *Haematococcus pluvialis* in the red phase using CO<sub>2</sub> supercritical fluid extraction technology with ethanol as co-solvent," 2018, Marine Drugs, 16(11):432, IF: 6.085. [Link](#)
- Q 1** 23. Sanzo, G.D., **Mehariya, S.**, Martino, M., Larocca, V., Casella, P., Chianese, S., Musmarra, D., Balducchi, R. and Molino, A., "Supercritical carbon dioxide extraction of astaxanthin, lutein, and fatty acids from

*Haematococcus pluvialis* microalgae," 2018, Marine Drugs, 16,(9):343. [Link](#)

Q 1

24. Molino, A., Iovine, A., Casella, P., **Mehariya, S.**, Chianese, S., Cerbone, A., Rimauro, J. and Musmarra, D., "Microalgae characterization for consolidated and new application in human food, animal feed and nutraceuticals," 2018, International Journal of Environmental Research and Public Health, 15(11):2436. [Link](#)

Q 2

25. Molino, A., Rimauro, J., Casella, P., Cerbone, A., Larocca, V., Chianese, S., Karatza, D., **Mehariya, S.**, Ferraro, A., Hristoforou, E. and Musmarra, D., "Extraction of astaxanthin from microalga *Haematococcus pluvialis* in red phase by using generally recognized as safe solvents and accelerated extraction," 2018, Journal of Biotechnology, 283:51-61. [Link](#)

## ADDITIONAL INFORMATION

### Presentations

1. **Oral Presentation** on "Biopolymer production from biomass produced by Nordic microalgae grown in wastewater" in BSB2-2022 - International Conference on Biotechnology, Sustainable Bioresources and Bioeconomy on 7-11 December 2022 Organised by Indian Institute of Technology (IIT-G) Guwahati-781039, Assam, India.
2. **Invited Lecture** on "Microalgal Bio-Refinery: Green technology for industrial application" in Faculty Development Program on "Green Technology and Approaches for Waste Valorization" on 13<sup>th</sup> -18<sup>th</sup> June 2022 Organised by Sharda University, School of Basic Sciences and Research, Greater Noida-201310, India.
3. **Invited Lecture as a Resource Person** on "Algal Bio-refinery: Promising Approach for Minimizing Carbon Foot-Print" in international webinar on climate change and future challenges under DBT star college scheme 2021-2022 on 04<sup>rd</sup> -05<sup>th</sup> March 2022 Organised by St. Mary's college (Autonomous) (Re-accredited by NAAC with 'A +' Grade), Thoothukudi - 628 001, Tamil Nadu, India and Sponsored by Department of Biotechnology Ministry of Science and Technology New Delhi, India.
4. **Oral Presentation** on "Cultivation of Micro-Algae for Extraction of Valuable Products: An Advancement in Algal-Refinery" in 61st Annual e-conference of Association of Microbiologists of India in association with the Indian Network for Soil Contamination Research (INSCR) on 03<sup>rd</sup> -05<sup>th</sup> February 2021 Jointly organized by The Energy and Resources Institute (TERI), Department of Zoology, University of Delhi (UoD), and Indian Agricultural Research Institute (IARI), New Delhi, India.
5. **Keynote Lecture** on "Nutraceuticals from microalgae: Cultivation of microalgae for extraction of bioactive compound" in International e-Conference on Frontiers in Industrial Biotechnology (ICFIBT2020) sponsored by AICTE, New Delhi, organized by the Department of Biotechnology, St. Joseph's College of Engineering, OMR, Chennai during 27<sup>th</sup> – 29<sup>th</sup> July 2020, India.
6. **Invited Talk as an Eminent Speaker** on "High-value added compounds from microalgae: Cultivation of microalgae for extraction bioactive compound" in e-Faculty Development Program cum Workshop on "Waste-to-Bioenergy" on 28<sup>th</sup> June- 4<sup>th</sup> July 2020 Organized by Sharda University, NCR, India & Maharashtra Institute of Technology, Aurangabad, India.
7. **Invited Talk** on "Nutraceuticals from microalgae: Cultivation of microalgae for extraction bioactive compound" in International Webinar on Microbial Biotechnology and Future Bio-Industries on 8<sup>th</sup> June 2020 at Paris, France.
8. **Invited Talk as a Resource Person** on "Valuable Products from Algae Using Effective Cultivation and Extraction Approach" in National Seminar on Climate Change: The Impact on Biodiversity and Global Health Security on 20<sup>th</sup> -22<sup>nd</sup> December 2019 at Department of Botany, University of Rajasthan, Jaipur, India.
9. **Oral Presentation** on "Biochemical conversion of CO<sub>2</sub> for cultivation of micro-algae and production of high value-added chemicals" in 59<sup>th</sup> Annual International conference of Association of Microbiologists of India and International Symposium on Host Pathogen Interaction on 09<sup>th</sup> -12<sup>th</sup> December 2018 at Central University of Hyderabad, Hyderabad, India.

10. **Oral Presentation** on "Cultivation of *Haematococcus pluvialis* for astaxanthin recovery in a bubble column photo bioreactor" in International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018) on 22<sup>nd</sup> -25<sup>th</sup> November 2018 at CSIR-IICT, Hyderabad, India.
11. **Oral presentation** on "Food waste and sewage sludge co-digestion: A case study in Hong Kong" in National Seminar on "Innovative Approaches in Biosciences" on 15<sup>th</sup> -16<sup>th</sup> December 2017 at Kanoria PG Mahila Mahavidyalaya, Jaipur, India.

#### Participated Projects

1. **Swedish project** "Development of sustainable and biobased UV filter chemicals", Swedish Research Council FORMAS (2019-00492)
2. **European project** "Valuable Products from Algae Using new Magnetic Cultivation and Extraction Techniques (VALUEMAG)", Grant agreement No. 745695, Italy. [Link- https://www.valuemag.eu/](https://www.valuemag.eu/)
3. **Hong kong Project** "Total Municipal Organic Waste Management by integrating Food Waste Disposal and Sewage Treatment (MOW-FAST)", Hong Kong SAR, [Link- https://www.ugc.edu.hk/eng/rgc/funded\\_research/funding\\_results/crf14\\_lay\\_sum.html](https://www.ugc.edu.hk/eng/rgc/funded_research/funding_results/crf14_lay_sum.html)
4. **European project** "Glycerol Biorefinery Approach for the Production of High-Quality Products of Industrial Value (GRAIL)", Grant agreement No. 613667, Italy [Link- https://cordis.europa.eu/project/id/613667](https://cordis.europa.eu/project/id/613667)
5. **Indian project** "Bioenergy from Waste: Hydrogen and Methane Production", Grant agreement No. GAP0067, CSIR-IGIB, Delhi, India.

#### Memberships

1. Member of Scandinavian Plant Physiology Society (SPPS), Sweden.
2. Life member of The Biotech Research Society (BRSI) (Life Membership No 2319), India.
3. Life member (Life Membership No. 3379-2013) of Association of microbiologist of India (AMI).
4. Life member of Indian Science Association (ISA), India.
5. Life member of International Forum for BOTANISTS Under the auspices of ISLS, India

#### Honours and awards

1. Awarded a BCSC Postdoctoral scholarship, 2020 by Blaustein Center for Scientific Cooperation- Ben Gurion University, Israel.
2. Awarded International PhD Fellowship, 2017 by Università degli Studi della Campania Luigi Vanvitelli, Italy.
3. Awarded the ENEA International Fellowship, 2013 by ENEA, Italy. [Link](#)
4. Best poster presentation award by AMI-2013, India.