



Kushi Yadav

Nationality: Indian **Date of birth:** 31/03/1993 **Gender:** Female

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Website: <https://scholar.google.com/citations?user=643OaZQAAAAJ&hl=en>

Home: House no. 17, VIP read, Raksha enclave, Near V care hospital , Mohali, 140603
Zirakpur, Punjab, (India)

ABOUT ME

I have worked on various profiles in last 7-8 years which nurtured me with skills like management, research, scientific writing, team lead, experimental design and collaboration.

WORK EXPERIENCE

Scientist-B

Patanjali Research Foundation

City: Haridwar | Country: India

Scientific writing, executing experimental research, conducting comprehensive research analyses, coordinating teams, developing technical curricula, drafting detailed project reports, delivering training sessions, presenting findings orally in conferences, preparing formal documentation, and overseeing the coordination and hospitality of guests.

Research Scholar and Teaching Assistant

Amity University [19/07/2019 – 08/12/2023]

City: Noida | Country: India Thesis Title: **Extraction and Identification of Bioactive Compound(s) Produced from**

Algae under Abiotic Stress

Microalgal isolation, Confocal microscopy, Extraction of Valorized Bioactive Moieties, Optimization using RSM-CCD design expert, Untargeted metabolites by HPLC and GC-MS, Targeted metabolomics by UHPLC-Q-ToF, Wastewater bioremediation, Antimicrobial, Antioxidant and Anti-cancer assays

Teaching: Green technology and biochemistry (Theory and Experiments)

TGT Science

S.S. International School [04/04/2018 – 05/05/2019]

City: Ghaziabad | Country: India Teach Science Subjects, Develop Lesson Plans, Assess Student Performance, Foster

Scientific Inquiry, Manage

Classroom, Collaborate with Colleagues, Support Student Development and Participate in Professional Development.

PGT Science

Harcourt Butler Ser. Sec. School [08/10/2017 – 03/03/2018]

City: New Delhi | Country: India Teach Advanced Science, Develop Curriculum, Assess Student Work, Conduct

Experiments, Guide Research Projects,

Mentor Students, Collaborate with Colleagues and Pursue Professional Development

Master's Research Dissertation

University of Delhi, Plant Molecular Biology Department, South Campus [11/11/2016 – 18/04/2017]

City: New Delhi | Country: India

Title: **Cloning and purification of protein kinase in plants**

Recombinant technology & DNA extraction, Molecular cloning, Protein induction and purification, Plant tissue culture and Plant morphometric analysis

DIGITAL SKILLS

NCBI tools (Genbank, BLAST)/ ORIGIN PRO/ DESIGN EXPERT/ Microsoft Office/ IBM Statistical package for Sciences (SPSS)/ PubMed, NCBI, Blast, ClustalW

ORGANISATIONAL SKILLS

Instrumentation HPLC, GC-MS, UHPLC-Q-ToF, Multimode reader spectrophotometer, Incubators, Electric shaker, Autoclave, Ultra centrifuge, Laminar Air Flow, Sonication, Chromatography etc.

Technical skills Molecular cloning, Protein induction and purification, Plant tissue culture, Plant morphometric analysis, Phenotypic assay, Microalgae cultivation, Microalgal isolation, Bioremediation, Bioprocessing and Extraction of value-added products

PUBLICATIONS

Research Papers

[2024]

Green innovation unites biodiesel production with bioremediation of waste metal cutting fluid using *Chlorella sorokiniana* Yadav K, Rai MP

Biomass Conversion and Biorefinery (Indexed in Scopus, SCI, Impact factor 4, Quartile Q3)

[2023]

Comparing pharmacological potential of two freshwater microalgae carotenoids towards antioxidant and anti-proliferative activity on liver cancer (HUH7) cell line Yadav K, Saxena A, Gupta M, Saha B, Sarwat M, Rai MP

Applied Biochemistry and Biotechnology (Indexed in Scopus, SCI, Impact factor 3, Quartile Q3)

[2023]

Combinatorial Effect of Multiple Abiotic Factors on Up-Regulation of Carotenoids and Lipids in *Monoraphidium* so. for Pharmacological and Nutraceutical Applications Yadav K, Kumar S, Nikalje GC, Rai MP

Applied Sciences (Indexed in Scopus, SCI, Impact factor 2.7, Quartile Q2)

[2023]

Screening of the Most Effective Media for Bioprospecting Three Indigenous Freshwater Microalgae Species

Yadav K, Nikalje GC, Pramanik D, Suprasanna P, Rai MP

International Journal of Plant Biology (Indexed in Scopus, SCI)

[2023]

Cultivation of *Monoraphidium* sp. on fruit peels to produce expedited lipids and carotenoids for the sustainable biorefinery Yadav K, Singh A, Rai MP

Vegetos (Indexed in Scopus, SCI)

[2022]

Algal biorefinery culminating multiple value-added products: recent advances, emerging trends, opportunities, and challenges Yadav K, Vasistha S, Nawkarkar P, Kumar S, Rai MP

3 Biotech (Indexed in Scopus, SCI, Impact factor 2.8, Quartile Q3)

[2018]

Mitogen activated protein kinase: A versatile signaling cascade in plants Yadav K, Jha SK, Sharma M, Pandey GK.

Journal of Protein and Proteomics (Indexed in Scopus, SCI)

Book Chapters

[2024]
Microalgae as a sustainable feedstock for biofuel production and value-added co-products Book Chapter in Microalgal Biomass for Bioenergy Applications Elsevier. ISBN: 978-0-44-31392- 77

Reetu, Yadav K, Vasistha S, Srivastava A, Rai MP

[2022]
An overview of the algal biofuel technology: key challenges and future directions Book Chapter in Handbook of Algal Biofuels. Elsevier. ISBN: 978-0-12-823764-9

Yadav K, Reetu, Rai MP.

[2022]
Algal physiology and cultivation Book Chapter in Handbook of Algal Biofuels. Elsevier. ISBN: 978-0-12-823764-9

Yadav K, Vasistha S, Rai MP.

[2021]
Wastewater Management and its Process in Energy and Environment Management Audits Book Chapter in Energy and Environment Management Audits, AkiNik Publications. ISBN: 978-93-91538-26-2

Yadav K, Rai MP

[2019]
Halophyte responses and tolerance to abiotic stresses Book Chapter in Ecophysiology, abiotic stress responses and utilization of halophytes Springer, Singapore. ISBN: 978-981-13-3761-1

Nikalje GC, Yadav K, Penna S.

[2019]
Halophytes: Prospective plants for future Book Chapter in Ecophysiology, abiotic stress responses and utilization of halophytes. Springer, Singapore. ISBN: 978-981-13-3761-1

Nikalje GC, Bhaskar SD, Yadav K, Penna S.

[2018]
Mitogen activated protein kinase: A versatile signaling cascade in plants Yadav K, Jha SK, Sharma M, Pandey GK. Journal of Protein and Proteomics (Indexed in Scopus, SCI)

PATENT

[03/2022] **A method for Sequential extraction of lipid. chlorophyll and carotenoids from fresh water green microalgae**

Monika Prakash Rai, Kushi Yadav.

Indian Patent Office

Appl. No 202211013460 (In Process) [05/2022]

A method for evaluating anti-proliferating activity of Monoraphidium sp. carotenoid extract carrying astaxanthin on liver cancer cells huh-7

Monika Prakash Rai, Maryam Sarwat, Kushi Yadav

Indian Patent Office

Appl. No. 202211035351 (In Process)

[09/2022]
A method for hyperaccumulation of astaxanthin production in Monoraphidium sp.

Monika Prakash Rai, Kushi Yadav, Anchala Singh

Indian Patent Office

Appl. No. TEMP/E-1/60206/2022-DEL (In Process).

NCBI SEQUENCES

[24/08/2021]

Chloralla sorokiniana strain 2B3

Submitted by Monika Prakash Rai, Kushi Yadav (Accession no. MZ882158)

[24/08/2021]

Tetrademus dimorphus strain BA1

Submitted by Monika Prakash Rai, Kushi Yadav (Accession no. MZ890151)

CONFERENCES AND SEMINARS

[29/01/2021] Telangana, India **Integrated Microalgal Biorefinery: A Zero Waste Management-Based Self-Sustaining and Bio-Economical Closed-Loop Approach** Yadav K & Rai M.P. Oral presentation at the *National Institute of Technology Conference*.

[19/07/2021 – 21/07/2021] Uttar Pradesh, India

Effect of Different Media on potential Freshwater Microalgae Monoraphidium sp. for Chlorophyll and Carotenoid Production. Yadav K & Rai M.P. Oral presentation at the *International Conference on Innovative and Current Advances in Agriculture Et Allied Sciences*.

[18/06/2022 – 19/06/2022] Noida, India

Insight into Potential of Microalgae-Derived Bioactive Compounds in Anticancer Activity. Yadav K. & Rai M.P. Poster presentation at the *International Conference on Role of Molecular Chemistry in Drug Design Et Development*.

[31/05/2021 – 04/06/2021] India

Lead auditorcourse on environment management systems, green campus audit, eco audit and energyaudit Y adav K, Course of National Science Foundation

WORKSHOP

[17/06/2022 – 24/06/2022]

Synthetic Biology of photosynthetic organisms to produce value-added products

Hands on training workshop organized by ICGEB, New Delhi, India

[11/10/2022 – 17/10/2022]

Program on techniques in modern biotechnology

Hands on training program organized by DST STUTI, Jaipur, India

CREDENTIALS

[09/2015] **Central Teacher Eligibility Test (C.B.S.E.)**

Qualified, obtained from Central Board of Secondary Education [17/04/2015]

Delhi Certificate of Merit (University of Delhi)

Securing 90% in Biochemistry and Immunology LSPT+LSPP-510 obtained from University of Delhi, New Delhi

EDUCATION AND TRAINING

Ph.D. Biotechnology

Amity University [07/2019 – 08/2023]

City: Noida | Country: India

M.Sc. Biotechnology

University of Rajasthan [10/2014 – 08/2017]

City: Jaipur

B.Ed.

Guru Gobind Singh Indraprastha University [09/2014 – 08/2015]

City: New Delhi | Country: India

B.Sc. Life Sciences

University of Delhi [08/2011 – 06/2014]

City: New Delhi | Country: India