PRITIKRISHNA MAJHI

Department of Microbiology

College of Basic Science and Humanities

Odisha University of Agriculture and Technology

Bhubaneswar, Odisha- 751003

Email: pkmajhi94@gmail.com,

pritimicro2017@gmail.com

Contact number: 7008782124, 9776866585

OBJECTIVE

Seeking a challenging career in the diverse field of Microalgal biotechnology in which I can render my dedicated service for the position with the full utilization of my skills & abilities.

ACADEMIC PROFILE

- **PhD (Thesis completed in the area of Microalgae & Bioremediation)** from Department of Microbiology, College of Basic Science and Humanities, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India in May, 2021.
  Mentor: Dr. Saubhagya Manjari Samantaray
  Thesis title: Bioremediation of chromium contaminated soil by microalgae and its effect on growth performance of rice plant
- **Master of Science (Microbiology)** from Department of Microbiology, College of Basic Science and Humanities, Odisha University of Agriculture and Technology, Bhubaneswar, Odisha, India in 2016 with **7.95** CGPA.
  Dissertation title: Comparative study on the antioxidant potency of some marine micro-algal strains
- **Bachelor of Science (Zoology)** from Dhenkanal Autonomous College, Utkal University, Odisha, India with **7.8** (CGPA) in 2014.
- **Council of Higher Secondary Education** from Dhenkanal Junior College, certification by C.H.S.E., Odisha, India with **67.16**% in 2011.
- **Board of Secondary Education** from Saraswati Sishu Vidya Mandir, Dhenkanal, certification by B.S.E., Odisha, India, **89**% in 2009.

RESEARCH EXPERIENCE

Worked as **SRF** in BPCL- Biofuel Project, OUAT, Bhubaneswar, Odisha, India (Since Dec., 2018 to 31.01.2022).

Research experience during Ph.D. thesis work entitled “Bioremediation of chromium contaminated soil by microalgae and its effect on growth performance of rice plant” from

Aug., 2016 to Dec 2020 under supervision of Dr S. M. Samantaray, Assistant Professor, Department of Microbiology, OUAT, Bhubaneswar, Odisha, India.

Work experience involved during Ph.D.

- Screening and maintenance of algae from water samples collected from Sukinda Mining area, Odisha.
- Growth optimization of the algae at varying concentration of Cr(VI).
- Identification and molecular characterization of the algae showing chromium removal by the reduction method (Absorption, Adsorption or Reduction).
- Application of the alga to Cr(VI) rich soil for cultivation of rice plants through pot culture & study of its impacts on different growth parameters of rice plants.

Research experience during M.Sc.

Thesis work entitled "Comparative study on the antioxidant potency of some marine micro-algal strains" from December 2015 to June 2016 under supervision of Dr S.M. Samantaray, Assistant Professor, Department of Microbiology, OUAT, Bhubaneswar, Odisha, India.

Work experience involved during M.Sc.

- Collection, isolation, identification and maintenance of pure culture under laboratory condition.
- Estimation of pigments, phenols and flavonoids from the experimental organism.
- Comparative study on the antioxidant potency and DPPH free radical scavenging activity of these organisms.

TECHNICAL SKILLS

- Microbial isolation, purification and other microbiological techniques.
- Bioremediation of heavy metals (Cr^{6+}).
- Microalgal culturing techniques, from lab scale to mass cultivation.
- Chromatographic techniques (HPLC).
- Operation of Light microscope, Centrifugation, Spectrophotometer, Scanning electron microscope (SEM), Inductively coupled plasma optical emission spectroscopy (ICP-OES), Fourier transmission infra-red spectroscopy (FTIR), Atomic absorption spectroscopy (AAS), Thermo gravimetric analysis (TGA), Bomb calorimeter.

ACHIEVEMENTS AND AWARDS

- Awarded for the best oral presentation in the Phycoremediation section of the webinar entitled "Recent trends in algae and their utility of Pharmaceutical Sciences (NW-RTAUP-2021)" held on 27th July, 2021.

PUBLICATIONS

- Majhi, P., & Samantaray, S. M. (2021). Bio-reduction of hexavalent chromium by an indigenous green alga and its impact on the germination of rice seed in chromium

enriched environment. *Bioremediation Journal* 25(2): 128-147. 10.1080/10889868.2020.1867048 (**IF: 1.9**)

- **Majhi, P.** and Samantaray, S.M. (2020). Effect of hexavalent chromium on paddy crops (*Oryza sativa*), *Journal of Pharmacognosy and Phytochemistry* 9(2): 1301-1305 (NAAS: 5.2)
- **Majhi, P.** and Samantaray, S.M. (2020). Thermo-tolerant microalgal diversity in the chromium metal polluted sites of Sukinda mining area, *International Journal of Current Microbiology and Applied Science* 9(3): 1109-1120. https://doi.org/10.20546/ijcmas.2020.903.130 (NAAS: 5.3)

BOOK CHAPTERS

- Samantaray, S.M., **Majhi, P.** and Dash, J. (2020). Microalgae: a potential anti-cancerous and anti-inflammatory agent, *Frontiers in soil and Environmental Microbiology* (pp. 329- 333). CRC Press, Taylor and Francis Group.
- **Majhi P.**, Nayak S. and Samantaray, S.M. (2021). Microalgal bioremediation of toxic hexavalent chromium: A Review, *Environmental and Agricultural Microbiology: Applications for sustainability*. (pp. 25- 37). Scrivener Publishing, Willey.
- **Majhi P.**, Mohanty, M.K. and Samantaray, S.M. (2021). Biosynthesis of Polyunsaturated Fatty Acids from Microalgae for Nutraceuticals. *Advances in Agricultural and Industrial Microbiology*. Springer Nature. DOI : 10.1007/978-981-16-8918-5 (In Press)

SUBMITTED GENE SEQUENCE DATA TO NCBI (NATIONAL CENTRE FOR BIOTECHNOLOGY INFORMATION, USA)

- Gene Bank Accession: MN855377 *Chlorella thermophila* isolate small subunit ribosomal RNA gene, partial sequence, **Majhi, P.**, Nayak, S. and Samantaray, S. M. https://www.ncbi.nlm.nih.gov/nuccore/MN855377.1
- Gene Bank Accession: MN031248 *Arthrospira* sp. strain 16S ribosomal RNA gene, partial sequence, Samantaray, S.M., **Majhi, P.**, Hayat, Z., Dash, S. and Mukherjee, A. https://www.ncbi.nlm.nih.gov/nuccore/MN031248.1
- Gene Bank Accession: MK636802 *Oscillatoria* sp. 16S ribosomal RNA gene, partial sequence. **Majhi, P.** and Samantaray, S. M. https://www.ncbi.nlm.nih.gov/nuccore/MK636802.1
- Gene Bank Accession: MK634687 *Desertifilum dzianense* strain 16S ribosomal RNA gene, partial sequence. Majhi,P. and Samantaray, S. M. https://www.ncbi.nlm.nih.gov/nuccore/MK634687.1
- Gene Bank Accession: MK422171 *Fischerella* sp. 16S ribosomal RNA gene, partial sequence. **Majhi, P.**, Samantaray, S. M., Nayak, S. and Mishra, M. https://www.ncbi.nlm.nih.gov/nuccore/MK422171.1
- Gene Bank Accession: MH537634 *Scenedesmus* sp. 0618 small subunit ribosomal RNA gene, partial sequence. Swain, S., Samantaray, S. M. and **Majhi, P.** https://www.ncbi.nlm.nih.gov/nuccore/MH537634.1

- Gene Bank Accession: OM108171 *Aspergillus niger* strain 5.8S ribosomal RNA gene, complete sequence; and internal transcribed spacer 2, partial sequence. Subhadarsini, S., Dash, D., Nayak, S. K., Swain, H. and **Majhi, P.** https://www.ncbi.nlm.nih.gov/nuccore/OM108171

SEMINAR/ WORKSHOP ATTENDED

- Webinar on "**Recent trends in algae and their utility of Pharmaceutical Sciences (NW-RTAUP-2021)**" held on 27th July, 2021 organized by Siksha O Anusandhan University.
- Pre-conference workshop on **"*Use of Environmental Scanning Electron Microscopy in Medicine*"** from 16th-17th July, 2018 at Institute of Physics, Bhubaneswar, Odisha.
- National seminar on **"*Science & Technology for Environmental Security*"** on 25th-26th November, 2017, at KIIT University, Bhubaneswar.
- National seminar on ***"Emerging Trends in Biotechnology and Crop Improvements"*** on 21st- 22nd November, 2017 at Rama Devi Women's University, Bhubaneswar.
- Seminar and workshop on **"*Skill & Entrepreneurship Development Programme (SEDP)*"** held from 16th to 30th January, 2017 at Department of Biotechnology, College of Engineering and Technology, Bhubaneswar.
- National seminar on **"*Microbial Technology: Prospects and Applications*"** on 25th-26th December 2015, at Department of Microbiology, OUAT, Bhubaneswar.
- National seminar on **"*Prospects of Microbiology in Modern Scenario*"** on 25th December 2014, Department of Microbiology OUAT, Bhubaneswar.

PERSONAL INFORMATION

Date of Birth : 13th April, 1994
Gender : Female
Languages known : Hindi, Odia & English
Computer Skills : Microsoft Word, Excel, Power Point
Category : General
Marital status : Unmarried
Permanent Address : House No. R/2, Niladri Bihar, Kantanali By Pass, Near SUN Hospital, Dhenkanal- 759001, Odisha

REFERENCE

Dr. Saubhagya Manjari Samantaray
Assistant Professor
Department of Microbiology, OUAT,
Bhubaneswar, Odisha, India.
Mobile No. 9437072779
Email ID. saubhagyasamantaray@yahoo.com

Prof. Gyana Ranjan Rout
D.Sc, FNASc, FNAAS, FISPGR
Professor & Head
Department of Agricultural Biotechnology,
Orissa University of Agriculture & Technology
Bhubaneswar- 751 003, Odisha, India
Tele Fax: 0091-674-2397755
Mob: 09437308014
Email ID. grrout@rediffmail.com

Prof. Bibhuti Bhusan Mishra
President, OBA, Odisha
ICAR-Emeritus Professor
Department of Microbiology, OUAT,
Bhubaneswar, Odisha, India.
Mobile No. 919437178128
Email ID. bb_mishra58@gmail.com

Dr. Deviprasad Samantaray
Assistant Professor
Department of Microbiology, OUAT,
Bhubaneswar, Odisha, India.
Mobile No. 9438361937
Email ID. dpsamantaray@yahoo.com

DECLARATION

I do hereby declare that all the above-mentioned information furnished is true to the best of my knowledge and belief.

Place: Bhubaneswar

Pritikrishna Majhi

(Pritikrishna Majhi)