Dr. SUKHPREET KAUR

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EDUCATIONAL QUALIFICATION

M.Sc. (2009): Biotechnology
ICAR NET (2016): Biotechnology
Ph.D. (2018): Department of Biotechnology
Title: **Design of a bioaugmentative process integrated with use of aerobic granules for treatment of dairy industry effluents**

INDUSTRIAL TRAINING & RESEARCH PROJECT

- Six month project work on "Bioremediation of dairy wastewater using Yeast Consortium under the guidance of Dr. Seema Garcha Prof in the department of biotechnology, Punjabi University Patiala (January-July, 2009)
- Two months, summer training in Bio-Tech Company Bioage Bioreactors, Mohali (June-July,2008) on fermentation techniques.

SEMINARS, SYMPOSIUM, WORKSHOPS AND CONFERENCES ATTENDED

- IPR's awareness workshop 19 November, 2008 organized by NSS department Punjabi University, Patiala and Punjab state council for Science and Technology, Chandigarh (PSCST).
- National symposium on Biotechnology 2009 : Present and Future Perspectives. Department of Biotechnology in Patiala.
- National Seminar on "Genetically Modified Foods: Current Scenario," January 19-20, 2012, organized by Punjabi University, Patiala.
- 9th BRSI convention & International Conference on Industrial Biotechnology & Indo-Italian Workshop on Food Biotechnology: Industrial processing, safety health (21^{st} – 23^{rd} November 2012).

- A Poster Presentation titled 'Study of variations between pysico-Chemical characteristics of dairy wastewater generated by organized and unorganized sector' in International Conference on Advances in Biotechnology & Bioinformatics & 10^{th} Convention of the Biotech Research Society, India (25^{th} To 27^{th} November 2013).

- A Poster Presentation titled 'Isolation of most frequently occurring and optimally performing microorganisms from dairy sludge of unorganized sector'. In 7th National Conference on Recent Advances in Chemical, Biological and Environmental Sciences (RACES) January 30-31, 2015

- Workshop attended on " Interactive program for Ph. D. students" organized by UGC-Human resource development center (HRDC), Punjabi University, Patiala from 7^{th} to 12^{th} September, 2015.

- Workshop attended on "Chromatographic techniques in life science research" organized by DBT-IPLS at sophisticated instrumentation center, Punjabi University Patiala on 26th & 27th November, 2015.

- Workshop attended on "Sensitization workshop on environmental pollution and health" organized by Women club, Punjabi University Patiala on 8th December, 2015.

- Indo-UK Work shop attended on "Sustainable Polymer applications" organized by Department of biotechnology, Thapar University Patiala on 9th November, 2015.

- Participated in 8th National Conference on Recent Advances in Chemical, Biological and Environmental Sciences (RACES) February 19-20, 2016 for the poster presentation titled 'Identification of most frequently encountered micro-organisms from dairy effluent and activated sludge which efficiently and rapidly reduce BOD'.

- Participated in National Conference on Nascent Innovations in chemical sciences Oct 21-22, 2016 for the poster presentation titled 'Design of a microbial consortium for the bioremediation of dairy wastewater.'

- Participated in International Conference on 'Recent Trends in Agriculture, Environment and Bio Science' 27-29 April, 2017 for the oral presentation titled 'Formation, characterization and optimization of use of aerobic granules for the treatment of dairy wastewater'.

- Vice President of Biotech society in Department of Biotechnology, Punjabi University, Patiala 2013-14.

- Reviewed papers for Taylor and Francis Journal, 'Bioremediation'.

WORK EXPERIENCE

Lecturer in Biotechnology Dasmesh girls college, Badal (Sri Muktsar Sahib Pb.) August, 2010 - September 2011.

Assistant Professor in Environment Sciences in Guru Nanak College, Sri Muktsar Sahib 1, August 2017- 18 Feb, 2018 and 23 July, 2018 – till date.

Currently working as an Assistant Professor in Department of Biotechnology, Guru Nanak College, Sri Muktsar Sahib.

Reviewer Certificate 2021 Taylor and Francis journal

Research experience: Ph.D on the topic entitled, "Design of a bioaugmentative process integrated with use of aerobic granules for treatment of dairy industry effluents" under the supervision of Prof. Neelam Verma Dept. of Biotechnology, Punjabi University Patiala.

Co-ordinator in One-Day Tech Start-Up Connect & Grow Workshop, sponsored by the Punjab State Council for Science & Technology, Chandigarh, under the Startup's Handholding & Empowerment (SHE) Initiative.

PUBLICATIONS

Research papers:

Garcha S., Kaur N. & Brar S.K. (2014). Aerobic granulation strategy for the treatment of dairy waste water. Indian J Dairy Sci 67(4):1-5. (NAAS: 5.17)

Garcha S., Verma N. & Brar S.K. (2014). Comparative study on pollution potential of dairy wastewater generated by organized and unorganized sector. Asian Jr. of Microbiol. Biotech. Env. Sc. 16(4):1051-1056. (NAAS: 5.0)

S Garcha., S.K. Brar & K. Sharma (2014). Performance of a laboratory prepared microbial consortium for degradation of dairy waste water in a batch system. Jr. of Sci. Ind. Res. 73 (346-350). (Impact Factor 0.55)

S. Garcha ., N. Verma & S.K. Brar (2016) Isolation, characterization and identification of microorganisms from unorganized dairy sector wastewater and sludge samples and evaluation of their biodegradability. Water Res. Ind. 16: 19-38 (Impact factor 5.1)

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Article published in 13th Punjab Science Congress (Feb 7-9, 2010), Punjab University Chandigarh under the name of 'Bioremediation of dairy effluents using microbial consortium'.

Brar S.K., Garcha S., Verma N. "Cultivation and characterization of aerobic granules for the treatment of dairy waste water." *Issues, Challenges and opportunities in Science and Technology* (ISBN 978-81-290-0251-8). Ed. Harpreet Kaur. Chandigarh: New Era International Publisher, 2022. 34-43

Lugani, Y., Brar, S. K., Kaur, Y., Singh, B. P., Kumar, D., & Kumar, S. (2024). Sustainable production of advanced biofuel and platform chemicals from woody biomass. In *Sustainable Biorefining of Woody Biomass to Biofuels and Biochemicals* (pp. 163-194). Woodhead Publishing. (ISBN 978-0-323-91187-0)