SHRIYA HANS

Address: Lane no. 51, Greater Kailash, Jammu -180011, Jammu and Kashmir, India.
Email: shriyahans9@gmail.com
Contact: *+91-9873785952*
LinkedIn: linkedin.com/in/shriyahans

Academics

Master of Technology in Bioprocess Technology *Sep2019-Oct2021*
Institute of Chemical Technology (Formerly UDCT), Mumbai, India
CGPA: 9.12 on the scale of 10 (I-DIST GRADE)

Bachelor of Technology in Biochemical Engineering *Aug2015-May2019*
University School of Chemical Technology, GGSIPU, Delhi, India.
CGPA: 6.98 on the scale of 10 (I GRADE).

Higher Secondary Certificate (HSC) Examination: 67.8 % (I GRADE) *March, 2014*
Secondary School Certificate (SSC) Examination: 8.2/10 CGPA (I GRADE) *March, 2012*

Competitive Test Scores

Test of English as Foreign Language (TOEFL): ***97 / 120***
R: 24 L: 27 S: 26 W: 20 *March2022*

JNU Combined Entrance Exam of Biotechnology (JNU-CEEB) ***All India Rank 9*** *May2019*

Publications

- **Hans, S.,** Kumar, N., Gohil, N. et al, 2022. Rebooting life: engineering non-natural nucleic acids, proteins, and metabolites in microorganisms. Microbial Cell Factories, 21, 100 *2022*
- Kumar, N., **Hans, S.,** Srivastava, A., 2021. Chromium bioremediation from river Yamuna using cyanobacteria at white and red illumination wavelengths. Journal of Water Process Engineering, 12, 2214-7144 *2021*
- Kumar, N., **Hans, S.,** Verma, R., Srivastava, A., 2020. Acclimatization of microalgae *Arthrospira platensis* for treatment of heavy metals in Yamuna River. Water Science and Engineering, 13(3), 214-222 *2020*

Research Internships

1) **Dr. Vishal Mishra,** Assistant Professor, School of Biochemical Engineering, Indian Institute of Technology, BHU, Varanasi, India *June2018 -Aug2018*

Project title: To study the flow and segregation of granular materials in 2D and 3D vessels

This project was based on determining the flow characteristics of granular materials in a hopper and segregator for separating agricultural materials.

This was a challenging project for me as it was outside my research area.

- Gained knowledge about various types of hoppers used in agriculture and food industry
- Constructed a segregator and successfully segregated grains based on size and shape

2) **Dr B K Mohapatra,** Senior Scientific Officer Gr-1, Central Forensic Science Laboratory, Central Bureau of Investigation, New Delhi *Jan2017 – Feb2017*

Project title: Recovery of high molecular weight human genomic DNA from various types of forensic exhibits its subsequent multiplex PCR amplification and genotyping

- Gained knowledge about various types of crime evidence and how to prepare them for fingerprinting such as teeth sample, hair sample, blood sample, tissue sample and dried biological stains
- PCR amplification and trouble shooting
- Genotyping
- Hematology unit: gained knowledge on how the study of blood plays an important role in criminal investigation

Academic Research Project

- **Bachelor's projects**

1) Treatment of heavy metals in river Yamuna using acclimatized microalgae *Arthrospira platensis*

Supervisor- Prof. Aradhana Srivastava, *University School of Chemical Technology, New Delhi* *Jan2018-Jul2019*

A method was developed to sequestrate heavy metals from highly contaminated wastewater of the Yamuna River. Microalga Arthrospira platensis was employed and production of value-added pigments chlorophyll and phycocyanin was also determined.

2) Chromium bioremediation from river Yamuna using cyanobacteria at white and red illumination wavelengths

Supervisor- Prof. Aradhana Srivastava, *University School of Chemical Technology, New Delhi* *Jan2019-Jul2019*

Bioremediation of Cr (III) and (VI) was observed at white and red illuminations by using the cyanobacterium Spirulina sp. A lab scale photobioreactor was used in this study for the purpose of microalgal cultivation and subsequence sequestration of Cr.

3) Study of Chlorella vulgaris growth in a helical photobioreactor for synthetic waste water treatment

Supervisor- Dr. Dinesh Kumar, *University School of Chemical Technology, New Delhi* *Jan2019-Jul2019*

Chlorella vulgaris was used for the treatment of synthetic wastewater of fruit juice industry. A helical photobioreactor was employed for the growth of this microalga and results were compared with flask study. Parameters such as DO, pH, COD, Nitrate, Nitrite and Ammonium concentration were determined.

- **Master's project**

Intensified Production of Polyhydroxybutyrate (PHB) by *Ralstonia eutropha* *Jan 2021-Oct 2021*

Supervisor: Prof. V. K. Rathod, *Head- Department of Chemical Engineering, Institute of Chemical Technology, Mumbai*

This project aims to produce and intensify the biopolymer polyhydroxybutyrate (PHB) by the bacterium Ralstonia eutropha. Intensification was done by the application of ultrasound and PHB. Box Behnken Design based RSM was used for obtaining optimum growth as well as ultrasound parameters that resulted in a comparable increase in PHB produced as compared to conventional way.

- Seminar on 'Recent Advances in Production of Heterologous Proteins by Mammalian Cells' *Semester-II*

Supervisor- Prof. G. D. Yadav, *FTWAS, FNA, FNASc,FRSC (UK), FIChemE (UK), FIIChE, Emeritus Professor of Eminence and Former Vice Chancellor and R.T. Mody Distinguished Professor J.C. Bose National Fellow (Govt. of India), Department of Chemical Engineering, ICT, Mumbai.*

International Conferences

- Poster presentation at the International Conference "Basic/AppliedSciences, Textiles, Mining, Environmental Engineering and Renewable Energy, Climate Change for Sustainable Development" at JNU, New Delhi, India on the research topic "Sequestration of Chromium III and VI ions from wastewater by *Spirulina* sp. and value-added pigment production" *6th July, 2019*
- Selected and attended international hands-on workshop on "Synthetic Biology of photosynthetic organism to produce value-added products" at the International Centre for Genetic Engineering and Biotechnology, New Delhi *17th -24th June, 2022*

Co-Curricular Activities

1) Participated in the National Research Challenge on Pharmaceutical Sciences organized by AR EduX and awarded "most beautiful presentation" *Dec2020*

2) Member of Swar (Music Society of GGSIPU) and participated in various music competitions *2015-2018*

3) Second prize in Rangoli making competition at GGSIPU *2017*

4) Participated in the technical fest of USCT "Chemchord" in the review paper presentation event "Chem-e-Debug" on the topic "Anti-cancer Drug Delivery by Nanoparticles in Nanomedicine" *2016*

5) Organized a Tree Plantation Drive (October, 2016) in GGSIPU, Dwarka, which included university tour for identification of plants and plantation of a variety of species *2016*

6) Event Coordinator of "Music Team" in GGSIPU Annual Cultural Fest – ANUGOONJ *2016 & 2017*

Merit-Based Scholarships

Awarded scholarship in M. Tech Bioprocess Technology throughout the Master's degree period 2019 -2021

Hobbies

Singing, Drawing, Reading and Dance Fitness