# सीएसआईआर-एकीकृत कौशल पहल कार्यक्रम CSIR-Integrated Skill Initiative Program

# **"FERMENTATION TECHNOLOGY"**

# 20<sup>th</sup> Feb. 2023 to 24<sup>th</sup> Feb. 2023



Dr. Sourish Bhattacharya, CSIR-CSMCRI



Dr. Debashish Ghosh, CSIR-IIP, Dehradun



Dr. S. Singh, NIT Warangal



Mr. Sreenadh Madapati Abode Biotec India Pvt. Ltd.



Dr. Anupama Srivastava, Parul University



Dr. Rahul Bhambure CSIR-NCL Pune



केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान (वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद, भारत) गिजूभाई बधेका मार्ग ,भावनगर 364002 (गुजरात)

**CSIR- Central Salt & Marine Chemicals Research Institute** (Council of Scientific & Industrial Research, India) Gijubhai Badheka Marg, Bhavnagar – 364 002 (Gujarat) www.csmcri.res.in



# **Experts:**

**Dr. Sourish Bhattacharya** is working as a Scientist at CSIR-Central Salt & Marine Chemicals Research Institute, Bhavnagar Gujarat, India. He is having a strong background in the area of microalgal biotechnology, microalgal biofuel, biopolymers and nutraceuticals for therapeutic applications.

**Dr. Anupama Shrivastava** is working as Head of the Biotechnology Department at Parul University. Her area of expertise involves microbial synthesis of biopolymers.

**Dr. Debashish Ghosh** is currently working as a Principal Scientist at CSIR-Indian Institute of Petroleum, Dehradun. He is having 17 years of R&D experience in microbial fermentation and bioprocess development. Dr. Ghosh primarily works on bioprocess development from biomass to 2<sup>nd</sup> and 4<sup>th</sup> generation biofuels / oleo chemicals / nutraceuticals / biopolymers through ethanologenic and oleaginous yeast mediated fermentation, material resource efficiency, life cycle impact assessment. Presently Dr. Ghosh is heading Biochemistry and Biotechnology Area, Material Resource Efficiency Division, at CSIR-IIP.

**Mr. Sreenadh Madapati** is working as a Director-Business Development at Abode Biotec India Pvt. Ltd. and has experience in leading the probiotics based business in India.

**Dr. Rahul Bhambure** is working as a Senior Scientist at CSIR-National Chemical Laboratory, Pune. His expertise is in the area of process development for protein drugs molecules used for treatment of infectious diseases.





केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान (वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद, भारत) गिजुभाई बधेका मार्ग ,भावनगर 364002 (गुजरात)

CSIR- Central Salt & Marine Chemicals Research Institute (Council of Scientific & Industrial Research) Gijubhai Badheka Marg, Bhavnagar – 364 002 (Gujarat) www.csmcri.res.in



CSIR Integrated Skill Initiative

# Background

Microbes are important in every part of our life and are widely exploited industrially in agro, food, pharma, chemical, energy, waste treatment, etc. The process for product development may differ but the underlining principles in all the above mentioned processes involves fermentation technology. The skill development programme on fermentation technology aims to introduce the basics of industrial fermentation process involving basic knowledge required for fermentation, parameters to be controlled during fermentation, its industrial application and recent technological advances.

# Beneficiaries of the course

- Process Engineers
  Shift Engineers
- Quality Control Manager
  Lab Technicians
- Entrepreneurs in Pharma Sector

#### Benefits of the course

The courses will be useful for the graduates aspiring to work in Pharma, biotech and food industries, fermentation industries or for the person who are already employed in the industries to sharpen their skills.

Focus on current needs of fermentation industry.

## Course duration: 5 days

# **COURSE DETAILS**

- Fermentation principles
- Bioreactor design
- Pilot scale experiments
- Downstream (purification) process and products formulation
- Material and Energy Balance Computations and Process Economics

- Biotech and Food
  Industry
- Fermentation based industries
- b Technicians

# **Training Program Fee**

₹ 1000/- + ₹ 180/- GST = ₹ 1180/-	Category I : Self- sponsored
	[Students, Individual (other than student) and
	Entrepreneur (as an individual)]
₹ 5000/- + ₹ 900/-GST = ₹ 5900/-	Category II : Any sponsored candidate
	(Government, Industry and sponsored by
	Entrepreneur)

## DIGITAL PAYMENT ONLY WILL BE ACCEPTED and NO CASH TRANSACTION.

# **Details of Fee Deposit**

## (Payment through RTGS/ NEFT only)

Amount (₹)	:	
Bank Name	:	
Branch Name	:	
Account No.	:	
Transaction ID and Date	:	

Signature of Depositor/ Candidate

Name:

# Kindly submit completed form on/ before 12<sup>th</sup> February 202 3

## To **Dr. Sourish Bhattacharya** at email : <u>sourishb@csmcri.res.in</u>, +91-8017750689

NOTE: Candidates with all required information and fees deposited through digital mode only will be accepted and will be selected based on their CV in the said training program. Please submit a printed copy of fees receipt and a xerox copy of the AADHAR Card during training program, if selected.

Accommodation for staying at Bhavnagar has to be arranged by Candidates only. The candidate has to produce their double dose completion certificate for introducing COVID-19 protective vaccines during joining to the training program. No accommodation will be provided by the Institute.



**केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान** (वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद, भारत) गिजूभाई बधेका मार्ग ,भावनगर 364002 (गुजरात)

CSIR- Central Salt & Marine Chemicals Research Institute (Council of Scientific & Industrial Research) Gijubhai Badheka Marg, Bhavnagar - 364 002 (Gujarat) www.csmcri.res.in





CSIR Integrated Skill Initiative

## **TRAINEE ENROLLMENT FORM**

TITLE OF SKILL DEVELOPMENT PROGRAM	:	FERMENTATION TECHNOLOGY
DATE(S), TIME AND VENUE	:	CSIR-CSMCRI, Bhavnagar 20th Feb. 2023 to 24th Feb. 2023
FULL NAME OF TRAINEE	:	
FATHER'S / HUSBAND'S NAME	:	
DATE OF BIRTH (DD/MM/YYYY)	:	
GENDER (MALE / FEMALE / OTHERS)	:	
CATEGORY (SC / ST / OBC / EWS / GENERAL)	:	
PHYSICALLY DISABLED (YES / NO)	:	
CURRENT STATUS (working/ entrepreneur/ student/ unemployed/ school dropout)	:	
QUALIFICATIONS	:	
PHOTO ID NUMBER (Aadhaar/ PAN/ Voter ID/ Passport)	:	
MOBILE NUMBER	:	
ALTERNATE MOBILE NUMBER	:	
EMAIL ADDRESS	:	
TRAINEE'S DOMICILE (RURAL / URBAN)	:	
FEE PAYMENT DETAILS	:	

DATE:

SIGNATURE OF APPLICANT

# Bank details of CSIR-CSMCRI for Trainee Program Fee



केन्द्रीय नमक व समुद्री रसायन अनुसंधान संस्थान

गिजुभाई बधेका मार्ग, भावनगर- ३६४ ००२

SMCRI CSIR-CENTRAL SALT & MARINE CHEMICALS RESEARCH INSTITUTE Gijubhai Badheka Marg, Bhavnagar 364 002, Gujarat, India Phone No. (0) 0278, 2471792 E-mail: <u>fao@csmcri.org</u>

1	Name of account holder	DIRECTOR, C.S.M.C.R.I.
2	Address	GIJUBHAI BADHEKA MARG, BHAVNAGAR 364002
3	e-mail address	fao@csmcri.org
4	Phone No./Mobile No.	0278-2471792
5	Fax No.	0278-2567562
6	Permanent Account Number (PAN)	AACCC1313P
7	Particulars of Bank Account	
	A. Name of the Bank	STATE BANK OF INDIA
	B. Name of the Branch	WAGHAWADI ROAD BRANCH
	C. Branch Code	10863
	D. Address	Shubham Shop No.G2/3, Plot No.2569 E1/2, Waghawadi Road Opp. Gulista Ground, Bhavnagar-364002 e-mail: <u>sbi.10863@sbi.co.in</u>
	E. Telephone No	0278-2569884
	F. Account No.	30267310153
	G. Type of Account	SAVINGS BANK ACCOUNT
	H. IFSC Code (RTGS/NEFT)	SBIN0010863
1 	I. MICR code	364002023

Electronic Fund Transfer Account Details