CURRICULUM VITAE

1. Name and full correspondence address: Dr. Nivedita Patra
Department of Biotechnology and Medical Engineering, NIT Rourkela, District Sundargarh, Odisha - 769008

2. Email(s) and contact number(s): patran@nitrkl.ac.in, nivedita.nitdgp@gmail.com
Landline: 0661-2462282

3. Institution: National Institute of Technology Rourkela

5. Gender (M/F/T): Female

6. Category Gen/SC/ST/OBC: General

7. Whether differently abled: No

8. Academic Qualification (Undergraduate Onwards)

Year	Degree/Class	Major/Board	Institute/School	CGPA/ %	Awards/Merits
1998	X standard	CBSE	Campus School Pantnagar	71	91 % in Science
2000	XII standard	CBSE	Campus School Pantnagar	79	81.2 % in PCMB
2006	B.Tech/M.Tech (Integrated)	Biotechnology (Specialization Biochemical Engineering)	USBT, Guru Gobind Singh Indraprastha University, Delhi Govt. funded.	70	Free seat in BTech on the basis of AI rank 57 in entrance exam MHRD scholarship in MTech on the basis of GATE 2005
2014	PhD	Biochemical Engineering and Biotechnology	Indian Institute of Technology, Delhi	7.75 CGPA	Institute fellowship from IIT Delhi
2015	Post-Doctoral researcher	Biotechnology	Dublin Institute of Technology, Dublin, Ireland	By Research	Postdoctoral fellowship from DIT Ireland

9. Ph. D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Thesis Title: Development and mass scale propagation of hairy roots of *Artemisia annua* in a suitable bioreactor for artemisinin production

Guide Name: Prof. A K Srivastava

Institute/University: Indian Institute of Technology Delhi, Hauz Khas, New Delhi - 110016

Year of Award: July 2014

10. Work experience (in chronological order):

S.No.	Positions held	Name of the Institute	From	To
1	Lecturer	NIT Durgapur	Jan 2007	July 2008
2	Post-Doctoral Research Associate	Dublin Institute of Technology, Ireland	July 2015	October 2015
4	Assistant Professor	National Institute of Technology, Rourkela	February, 2014	June 2024
5	Associate Professor	National Institute of Technology, Rourkela	July 2024	Continuing

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No.	Name	Awarding agency	Year
1.	AISSCE 7th rank out of 150 students	Campus School Pantnagar	2000
2.	Free seat in BTech on the basis of AI rank 57 in entrance exam	GGSIPU Delhi	2001
3.	Shortlisted for IIT Bombay research fellowship scheme	IIT Bombay	2004
4.	Scholarship in MTech on the basis of GATE	MHRD	2005
5.	CSIR NET	CSIR	2005
6.	Institute scholarship in PhD at IIT Delhi	MHRD	2008
7.	Best paper awards at international conference	CPHEE-2011	2011
8.	Postdoctoral research fellowship	DIT, Dublin, Ireland	2015
9.	Early Career Research Award	SERB, Govt. of India	2017
10.	Best poster presentation award at international conference	RTBS-2020	2021

12. Publications *(List of papers published in SCI Journals, in year wise descending order as first author* or corresponding author$^{\#}$).*

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Nanda, J.; Sahu B. B.; Singh, V. R; and Patra, N.$^{\#}$	Production of *Bacopa* saponins using fed batch studies in bioreactor	***Plant Cell Tissue and Organ Culture (Springer Nature: IF:3.0)***	Accepted	-	2025
2.	Yadav, J., & Patra, N$^{\#}$.	Modeling of poly-β-hydroxybutyrate production by *Bacillus subtilis* and its use for feed forward bioreactor studies	***Applied Microbiology and Biotechnology (Springer Nature: IF: 5.56)***	107(1)	57-69	2023
3.	Sahoo, Krishna K. Sahu B. B.; Singh, V. R; and Patra, N.$^{\#}$	Enhanced production of *Bacopa* saponins by repeated batch strategy in bioreactor	***Bioprocess and Biosystems Engineering (Springer Nature: IF: 3.8)***	45(5):	829-841	2022

4.	Seth, B; Sahoo, Krishna K. Sahu B. B.; Singh, V. R; and Patra, N#.	Statistical optimization of bacoside A biosynthesis in plant cell suspension cultures using response surface methodology	***3 Biotech (Springer Nature: IF:2.89)***	10	264	2020
5.	J., Leonard; Seth, B; Sahu B. B.; Singh, V. R; and Patra, N#.	Statistical optimization for enhanced bacoside A production in plant cell cultures of *Bacopa monnieri*	***Plant Cell Tissue and Organ Culture (Springer Nature: IF:3.0)***	133	203-214	2018
6.	Panda, I., Balabantaray, S.,Sahoo, S.K.& Patra, N#.	Mathematical model of growth and poly-hydroxybutyrate production using microbial fermentation of *Bacillus subtilis*	***Chemical Engineering Communications (IF: 2.59)***	205	249-256	2018
7.	Yadav, J., Balabantaray, S., & Patra, N#.	Statistical optimization of fermentation conditions for the improved production of poly-β-hydroxybutyrate from *Bacillus subtilis.*	***Chemical Engineering Communications (IF: 2.59)***	204	1122-1128	2017
8.	Patra, N. * & Srivastava, A.K.	Artemisinin production using plant hairy root cultures in gas and liquid phase bioreactors.	***Plant Cell Reports (IF: 6.2)***	35	143-153	2016
9.	Patra, N. * & Srivastava, A.K.	Use of model-based nutrient feeding for improved production of artemisinin by hairy roots of *Artemisia annua* in a modified stirred tank bioreactor	***Applied Biochemistry and Biotechnology (IF: 3.094)***	177	373-388	2015
10.	Patra, N. * & Srivastava, A.K.	Mass scale artemisinin production in a stirred tank bioreactor using hairy roots of *Artemisia annua*	***International Journal of Bioscience, Biochemistry and Bioinformatics***	4	467-474	2014
11.	Patra N*., Srivastava A.K.	Enhanced Production of Artemisinin by Hairy Root Cultivation of *Artemisia annua* in a Modified Stirred Tank Reactor	***Applied Biochemistry and Biotechnology (IF 3.094)***	174	2209-2222	2014
12.	Patra, N*., Srivastava, A. K., & Sharma, S.	Study of Various Factors for Enhancement of Artemisinin in *Artemisia Annua* Hairy Roots	***International Journal of Chemical Engineering and Applications***	4	157-160	2013

14. Books/Reports/Chapters/General articles etc.

S.No.	Author(s)	Title	Publisher	Year of Publication
1.	Yadav, J., Patra, N#.	Strategies for Upscaling Polyhydroxyalkanoates Production for Economical Applications in Biomedical Sector. In: Kalia, V.C. (eds) Polyhydroxyalkanoates: Sustainable Production and Biotechnological Applications III. Springer, Singapore. https://doi.org/10.1007/978-981-96-2022-7_10	***Springer, Singapore***	2025
2.	Patra, N. *, Sharma, S., & Srivastava, A. K.	Statistical media optimization for enhanced biomass and Artemisinin production in Artemisia annua hairy roots. In M. M. Srivastava, L.D. Khemani, & S. Srivastava (Eds.), Chemistry of Phytopotentials: Health Energy and Environment Perspectives	***Heidelberg Springer-Verlag Berlin***	2011
3.	Patra, N*. & Srivastava, A.K.	Mass Production of artemisinin using hairy root cultivation of Artemisia annua in bioreactor. In Prof A. I. Pavlov and Prof. Th. Bley (Eds.), **Bioprocessing of Plant in vitro Systems**	***Springer, Heidelberg, Germany (Invited review)***	2017
4.	Yadav, J., & Patra, N#.	Batch culture of *Bacillus subtilis* for the production of poly-beta-hydroxybutyrate in a bioreactor	***Proceedings of 70th Annual session of Indian Institute of Chemical Engineers - CHEMCON – 2017***	2017
5.	Patra, N*., S. Sharma & Srivastava, A.K.	Use of hairy root technology for mass production of secondary metabolites from plants	***Proceedings of 4th World Ayurveda Congress***	2010
6.	Patra, N*., S. Sharma & Srivastava, A.K.	Mass production of Artemisinin by Cultivation of Artemisia annua hairy roots in a Nutrient Mist Bioreactor	***Proceedings of International Symposium & 62nd Annual Session of IIChE in association with International Partners (CHEMCON-2009)***	2009

15. List of projects sponsored/consultancy project completed:

S.No	Project Title	Agency	Period	Status	Position
1.	Design of waste treatment plant	Durgapur Steel Plant, West Bengal	2007-2008	Completed	Investigator
2.	Fermentation-assisted recovery of novel compounds from food industry wastes	SERB DST Early Career Research Award 2017	2018- 2021	Ongoing	Principal Investigator