

CURRICULUM VITAE

1. **Name and Nationality** : Dr. Vikas Singh Chauhan, INDIAN.
2. **Present position** : Senior Principal Scientist and Head,
Professor, AcSIR
3. **Official address** :
Plant Cell Biotechnology (PCBT) Dept.,
Central Food Technological Research Institute (CFTRI), Mysore – 570 020.
Phone: 0821- 2516501(O), 0821-2342736 (R),
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4. **Mailing Address** : **As above.**
5. **Residential Address** :
#36, CFTRI Layout, Bogadi II Stage, Mysore – 570 026, Karnataka, India
6. **Date of birth** : March 21, 1967.
7. **Marital status** : Married
8. **Academic qualification** : ***M.Sc., Ph.D., M.B.A..***

Degree/Diploma/ Certificate	Institution	Year	Subjects	Division/Status/Grade (Letter and Point Grade)
(II) Biological Science				
Ph.D.	Rani Durgawati University, Jabalpur (M.P.)	1991	Bioscience	By Thesis
M.Sc. Previous and Final Years	- DO-	1987	Bioscience	Ist (73.5%)
B.Sc. I, II and III	-DO-	1985	Physics, Chemistry, Botany, Zoology and Languages	Ist (61%)
Higher Secondary	M.P. Board of Secondary Education, Bhopal (M.P.)	1982	Physics, Chemistry, Biology, Hindi, English	Ist (63.7%)

(I) Management				
Master of Business Administration (M.B.A.)	Indira Gandhi National Open University (IGNOU), New Delhi.	2006	Management (specialization in Operations Management)	First Division Grade - B (3.65 equivalent to 63%)

Title of Doctoral Thesis: “Ecophysiological studies on the interaction among bloom forming Cyanobacteria of local water bodies.”

Title of MBA project work: “A study on the management of the knowledgebase resources for business development at a R&D laboratory (Study of a public funded R&D Institute)”.

9. EMPLOYMENT

Sl. No.	Employer	Designation	Year
1	Central Food Technological Research Institute (CFTRI), Mysore-570 020.	Senior Principal Scientist/ Scientist Group IV (5)	2012 onwards
		Principal Scientist/Scientist Group IV (4)	2007-2012
		Senior Scientist/Scientist Group IV (3)	2003-2007
		Scientist/ Scientist Group IV (2)	1999-2003
2.	Ballarpur Industries Limited, Bangalore (Deputed to The Global Green Company Limited, Bangalore)	Manager - Quality Systems and Safety, Health and Environment (SHE)	April 1998 to May 21, 1999.
		Assistant Manager-Quality Systems	May 1997 to April 1998 (Transferred from Sl.No.3)
3.	Ballarpur Industries Limited, SPIRULINA FARM Nanjangud.	Assistant Manager- R&D	August 1995 to April 1997 (transferred from Sl No. 4)
4.	Thapar Corporate R& D Centre, Patiala.	Research Scientist	From March 1992 after completion of Ph.D.

10. DETAILS OF RESEARCH INTEREST

Microalgal biotechnology, Microalgae as source of nutraceuticals

Evaluation of microalgal nutraceuticals in in vitro and in vivo models

Development of microalgae fortified food products for health benefits.

11. MAJOR RESEARCH PROJECTS COMPLETED AND ONGOING (Last Five Years)

Sl.No.	Title of Project	Funding Agency	Role	Funds
1	Development of the process for mass cultivation of selected microalgae for hydrocarbon production	ONGC-KDMIPE, Dehradun	Co-PI	95 Lakhs
2	Development of bench scale prototype reactor extraction system for integrated CO ₂ sequestration, Aquatic Microbial Oxygenic Photoautotrophs (AMOPs) cultivation and conversion to value added products (food and biofuel)	Dept. of Biotechnology (DBT), New Delhi	Co-PI	42 Lakhs
3	To evaluate the red microalga, <i>Porphyridium purpureum</i> , as a source of Eicosapentaenoic Acid (EPA) for enrichment of moringa leaf powder	CSIR-CFTRI	Member	In-House Project
4	S&T Interventions to combat malnutrition in women and children	CSIR project	Member	In-House Project
5*	Computational Fluid Dynamic (CFD) modeling of Algal photobioreactors for CO ₂ sequestration and conversion to value added products (food, fuel)	Dept. of Biotechnology (DBT), New Delhi	Co-PI	44 Lakhs
6*	Life cycle and techno-economic assessment of algae-based CO ₂ sequestration and conversion to value added products (food, feed and fuel)	Dept. of Science and Technology (DST), New Delhi	PI	30 Lakhs
7*	Microalgae as alternate source of bioavailable Vitamin B ₁₂	Dept. of Biotechnology (DBT), New Delhi	Co-PI	49 Lakhs
8*	Biodiesel production using indigenous microalgae of North-East India	Dept. of Biotechnology (DBT), Govt. of India, New Delhi	Co-PI	18 Lakhs

***Ongoing Projects**

12. PUBLICATIONS, PROCESSES AND PATENTS

- Research Papers published in reputed national/international journals including book chapters : **29**
- Patent filed. : **2**
- Processes filed : **5**

(Refer Annexure – I).

13. OTHER MAJOR AFFILIATION

- **Affiliated to Academy of Scientific and Innovative Research (AcSIR) as Professor**

14. Ph.D. GUIDESHIP BEING HELD AT PRESENT

Currently holding the Ph.D. Guideship of AcSIR, New Delhi for Biological Science

15. NUMBER OF Ph.D. STUDENTS CURRENTLY GUIDING

- Presently serving as Guide to Two Ph.D. Students registered under AcSIR

(DR. VIKAS SINGH CHAUHAN)

Date :

ANNEXURE – I

LIST OF PUBLICATIONS, PROCESS AND PATENT OF DR. VIKASH SINGH CHAUHAN

ARTICLES

1. Sarat Chandra, T., Aditi, S., Maneesh Kumar, M., Mukherji, S., Modak, J., **Chauhan, V.S.**, Sarada, R., Mudliar, S.N. (2017) Growth and biochemical characteristics of an indigenous freshwater microalga, *Scenedesmus obtusus*, cultivated in an airlift photobioreactor: effect of reactor hydrodynamics, light intensity, and photoperiod. *Bioprocess and Biosystems Engineering* 40 (7), 1057-1068.
2. Sarat Chandra, T., Maneesh Kumar, M., **Chauhan, V. S.**, Mukherji, S., Sarada R., Mudliar, S. N. (2017) Life cycle assessment of microalgae based biodiesel production to evaluate the impact of biomass productivity and energy source. *Resources Conservation and Recycling*. 122: 286-294.
3. Usha, M.T., Sarat Chandra, T., Sarada, R., **Chauhan, V.S.** (2016) Removal of nutrients and organic pollution load from pulp and paper mill effluent by microalgae in outdoor open pond. *Bioresource Technology* 214:856-860.
4. Sarat Chandra, T., Deepak, R.S., Maneesh Kumar, M., Mukherji, S., **Chauhan, V.S.** Sarada, R., Mudliar, S.N. (2016) Evaluation of freshwater microalga *Scenedesmus obtusus* for feed and fuel applications: Effect of carbon dioxide, light and nutrient sources on growth and biochemical characteristics. *Bioresource Technology* 207: 430-439.
5. Vidyashankar, S., VenuGopal, K.S., Swarnalatha, G.V., Kavitha, M.D., **Chauhan, V.S.**, Ravi, R., Bansal, A.K., Singh, R., Pande, A., Ravishankar, G.A., Sarada, R. (2015) Characterization of fatty acids and hydrocarbons of chlorophycean microalgae towards their use as biofuel source. *Biomass Bioenergy* 77:75-91.
6. Vidyashankar, S., Sireesha, E., **Chauhan, V.S.**, Sarada, R. (2015) Evaluation of microalgae as vegetarian source of dietary polyunsaturated fatty acids under autotrophic conditions. *J Food Sci Technol* 52(11) : 7070-7080 (DOI 10.1007/s13197-015-1781-8)
7. Sarat Chandra, T., Mudliar, S.N., Vidyashankar, S., Mukherji, S., Sarada, R., Krishnamurthi, K., **Chauhan, V.S.** (2015) Defatted algal biomass as a non- conventional low- cost adsorbent: Surface characterization and its adsorption characteristics by methylene blue based adsorption. *Bioresource Technology* 184: 395–404 (<http://dx.doi.org/10.1016/j.biortech.2014.10.018>).
8. Swarnalatha, G.V., Hegde, N.S., **Chauhan, V.S.**, Sarada, R. (2015) The effect of carbon dioxide rich environment on carbonic anhydrase activity, growth and metabolite production in indigenous freshwater microalgae. *Algal Research* 9: 151-159 (DOI 10.1016/j.algal.2015.02.014).
9. Vidyashankar. S., VenuGopal, K.S., **Chauhan, V.S.**, Muthukumar, S.P., Sarada, R. (2015) Characterization of defatted *Scenedesmus dimorphus* algal biomass as animal feed. *Journal of Applied Phycology*.27: 1871-1879.

10. Sarat Chandra, T., Suvidha, G., Mukherji, S., **Chauhan, V.S.**, Vidyashankar, S., Krishnamurthi, K., Sarada, R., Mudliar, S.N. (2014) Statistical optimization of thermal pretreatment conditions for enhanced biomethane production from defatted algal biomass. *Bioresource Technology* 162: 157-165.
11. Vidyashankar, S., Deviprasad, K., **Chauhan, V.S.**, Ravishankar, G.A., Sarada, R. (2013) Selection and evaluation of CO₂ tolerant indigenous microalga *Scenedesmus dimorphus* for unsaturated fatty acid rich lipid production. *Bioresource Technology*, 144:28-37.
12. Sarada R, Ranga Rao A, Kamath, S.B., Dayananda C, Anila N, **Chauhan, V.S.**, Ravishankar, G.A. (2012) Influence of different culture conditions on yield of biomass and value added products in microalgae. *Dynamic Biochemistry, Process Biotechnology and Molecular Biology*, 6 (Special Issue 2): 77-85.
13. Chanakya, H.N., Mahapatra, D.M., Sarada, R., **Chauhan, V.S.** and Abitha, R. (2012) Sustainability of large-scale algal biofuel production in India. **Journal of Indian Institute of Science** 92 (1) : 63-98
14. **Chauhan, V.S.** and Ramamurthy, V. (2005) Alleviation of vitamin B₁₂ requirement by chloramphenicol in *Chlorella kabini* growing as a contaminant in *Spirulina* ponds. **Indian Journal of Microbiology** 45(1) : 17-20.
15. **Chauhan, V. S.** (2003) Gherkin Industry in India: An Overview. **Indian Food Industry** 22 (1) : 20-24, 37.
16. Singh, G., **Chauhan, V.S.** and Ramamurthy, V. (1999) Effect of continuous and cyclic illumination on the growth of different *Spirulina* isolates. **Microbios** 99: 83-88.
17. **Chauhan, V.S.** and Ramamurthy, V. (1996) Daily reduction in oxygen production rate for photosynthetic process monitoring in outdoor algal ponds. **Bioprocess Engineering** 15: 9-12.
18. **Chauhan, V.S.**, Singh, G., and Ramamurthy, V (1995) Eucalyptus kraft black liquor enhances growth and productivity of *Spirulina* in outdoor cultures. **Biotechnology Progress** 11: 457-460.
19. Singh, G., **Chauhan, V.S.** and Ramamurthy, V (1995) Kraft black liquor for improving the productivity of *Spirulina biomass*. **Biotechnology Letters** 17: 771-776.
20. **Chauhan, V.S.**, Yadav, K.R., Thacker, S.P., Ramamurthy, V. and Kothari, R.M. (1994) A novel isolate of *Chlorella* recalcitrant in an outdoor *Spirulina* cultivation. **Fresenius Environmental Bulletin** 3: 691-696.
21. **Chauhan, V.S.**, Kothari, R.M. and Ramamurthy, V. (1994) Efficient method for extraction of phycocyanin from *Spirulina*. **Biotechnology Technique** 8: 525-528.
22. **Chauhan, V.S.**, Ramamurthy, V. and Kothari, R.M. (1994) A project report on *Spirulina*. Published by: Thapar Corporate Research and Development Centre, Patiala, India.
23. Bagchi, S.N., **Chauhan, V.S.** and Marwah, Jyoti Bala (1993) Effect of an antibiotic from *Oscillatoria laet-virens* on growth, photosynthesis and toxicity of *Microcystis aeruginosa*. **Current Microbiology** 26: 223-228.

24. **Chauhan, V.S.**, Marwah, Jyoti Bala and Bagchi, S.N., (1992) Effect of an antibiotic from *Oscillatoria* sp. on phytoplankters, higher plants and mice. **New Phytologist** **120**: 251-257.
25. Bagchi, S.N., Palod, A. and **Chauhan, V.S.** (1992) Sustained nitrate metabolism by a chlorate resistant mutant of the cyanobacterium *Phormidium uncinatum*. **Journal of Plant Physiology** **139**: 764-766.
26. Bagchi, S.N., Palod, A. and **Chauhan, V.S.** (1990) **Algicidal** properties of a bloom forming blue green alga *Oscillatoria* sp. **Journal of Basic Microbiology** **30**: 21-29.
27. Bagchi, S.N., **Chauhan, V.S.** and Palod, A. (1990) **Heterotrophy** and nitrate metabolism in a cyanobacterium *Phormidium uncinatum*. **Current Microbiology** **21**: 53-57.
28. Palod, A., **Chauhan, V.S.** and Bagchi, S.N. (1990) Regulation of nitrate reduction in a cyanobacterium *Phormidium uncinatum*: distinctive modes of ammonium repression of nitrate and nitrite reductases. **FEMS Microbiology Letters** **68**: 285-288.
29. Bagchi, S.N., Palod, A. and **Chauhan, V.S.** (1989) **Photosynthetic** control of nitrate metabolism in *Phormidium uncinatum*, a cyanobacterium. **Current Microbiology** **19**: 183-187.

BOOK CHAPTER

30. Sheikh, A., Krishnamurthy, K., Yadav, R.R., Devi, S.S., Chakrabarti, T., Mudliar, S.N., **Chauhan, V.S.**, Sarada, R., Elumalai, S. (2013) Algae-Mediated Carbon Dioxide Sequestration for Climate Change Mitigation and Conversion to Value- Added Products, in "Biotechnological applications of microalgae" Ed. : F. Bux. CRC Press, Taylor and Francis, USA, pp 161-177.

POSTER/ PAPER PRESENTATION

1. Rashmi V, Madhubalaji C K, Vikas Singh Chauhan, Shylaja M Dharmesh, R. Sarada. Bioavailability of Vitamin B12 from *Spirulina platensis* in Albino Wistar Rats. 85th Annual Meeting of SBC (I), 21-24, November 2016, Mysore.
2. Madhubalaji C K, Rashmi V, M. Nurul Islam, Vikas Singh Chauhan, R Sarada. Cultivation of vitamin B₁₂ containing *Chlorella vulgaris* in open raceway pond and identification of associated bacteria. 85th Annual Meeting of SBC (I), 21-24, November 2016, Mysore.
3. G.V.Swarnalatha, M.D.Kavitha, S.Vidyashankar, K.S.Venugopal, **V.S. Chauhan**, R.Sarada, and G.A Ravishankar 2012. Evaluation of indigenous algal strains for lipid production under different stress conditions. Poster presented at world congress on Biotechnology- 2012 held during 4- 6th May at Leonia International Centre for Exhibitions & conventions, Hyderabad.

4. R.Sarada, Daris P.Simon, Kathiresan S, Anila. N and **V.S. Chauhan** 2012. *Agrobacetrrium* mediated microalgal transformations to produce high value metabolites. Paper presented at Indo –US workshop on “Cyanobacteria: molecular networks to biofuels” jointly organised by IIT mumbai, India and Purdue University, USA held at Lagoona Resort, Lonavala, India during 16th to 20th December 2012.
5. Kavitha M.D., **Chauhan V.S.**, Sarada R., Ravishankar G.A. 2012. Biotechnological aspects for improving biomass, phycoerythrin and lipid content in *Porphyridium purpureum*. Poster presented at world congress on Biotechnology- 2012 held during 4-6th May at Leonia International Centre for Exhibitions & conventions, Hyderabad. (**Awarded second best poster**).
6. Vidyashankar.S, **Chauhan V.S**, R.Sarada 2013. Bio-prospecting microalgae as sustainable source of nutritionally important fatty acids. Poster presented at 34th annual meeting of PTCA(I) and National symposium on Plant tissue culture and biotechnology for food and nutritional security held at CFTRI during 11-13th March 2013 (**Awarded First best poster**).
7. Venugopal, K.S., Vidyashankar, S., Chauhan, V.S., Sarada, R., Ravishankar, G.A. “Isolation and characterization of indigenous *Scenedesmus* strains for biotechnological applications”. Presented in “International symposium on recent advances in cross-disciplinary microbiology, avenues and challenges” December 14-17, 2010 at Ranchi, Jharkhand.
8. Sarada, R., Chauhan, V.S., Ravishankar, G.A., “Role of microalgae in conversion of waste to energy as green technology intervention”. Presented in “International conference on Bio-Energy from wastes : Green chemistry intervention: November 25-26, 2010 at NEERI, Nagpur.
9. Vidyashankar S., Venu Gopal K.S., **Chauhan V.S.**, Sarada R. (2013) Toxicity evaluation of defatted microalgal biomass (*Scenedesmus dimorphus*) towards its use as animal feed. Poster presented at 7th International Food Convention (IFCON) "NSuRE Healthy Foods" held at CSIR-CFTRI, Mysore, India during December 18-21, 2013.
10. Swarnalatha G.V, **Chauhan V.S.**, Sarada R. (2013) Indigenous microalgae for CO₂ sequestration and value added products. Poster presented at 7th International Food Convention (IFCON) "NSuRE Healthy Foods" held at CSIR-CFTRI, Mysore, India during December 18-21, 2013.
11. Kavitha M.D, **V.S.Chauhan**, R.Sarada (2013) Nutritional profiling of *Porphyridium purpureum* grown under optimized culture conditions. Poster presented at 7th International Food Convention (IFCON) "NSuRE Healthy Foods" held at CSIR-CFTRI during December 18-21, 2013.
12. Vidyashankar, S., Naik, A.V., Chanukya, B.S., Chauhan, V.S., Sarada, R., Ravishankar, G.A. “Evaluation of water bodies in Karnataka for microalgae and their possible applications” Poster presented at “International Symposium on Phycological Research”

February 25-27, 2010 organized by Centre of Advanced Study in Botany, Banaras Hindu University (BHU), Varanasi – 221 005, India.

13. Singh, G., Thacker, S.P., **Chauhan. V.S.** and Ramamurthy, V. (1993) Spirulina, prospects and promises. **Presented at First Lawrence Bogorad Symposium. May 8-9, 1993, Cambridge, Mass., USA.**
14. Singh, G., **Chauhan. V.S.**, Thacker, S.P., L. Bogorad and Ramamurthy, V. (1993) Studies on Spirulina growth characterization and DNA transformation. **Presented at Molecular Biology of Cyanobacteria Workshop, May 30 to June 2, 1993, Pacific Grove, California, USA.**
15. Bagchi, S.N., **Chauhan, V.S.** and Palod, A. (1989) Algicidal substance production by a novel isolate of *Oscillatoria* sp. **Paper presented in the annual meeting of Societies of West Germany and Netherlands Microbiologists' held at Marburg, Germany.**

PATENT FILED

1. **Chauhan, V.S.** et al. (2012) "A composition and method to control rotifer infestation in microalgal culture systems". **Indian Patent Application** No. 1787/DEL/2012 filed on 11.6.2012 by CSIR (joint patent with ONGC).
2. Hebbar, H.U., Raghavarao, K.S.M.S., Yadav, R.A., Rekha, M.N., Ramteke, R.S., **Chauhan, V.S.** (2005) Process for the dehydration of vegetables using radio frequency waves and hot air (NF No. : 463/NF/2004; DEL No. : 767/DEL/2005).

PROCESS KNOW-HOW DEVELOPED

1. Process know-how for "Cultivation of Beta Carotene rich *Dunaliella*"
2. Process know-how for "Cultivation of *Botryococcus braunii*"
3. Process know-how for preparation of "Nutra Chikki with added *Spirulina*"
4. Process know-how for preparation of "*Spirulina* choco cereal bar"
5. Process know-how for preparation of "Chutney powder fortified with *H. subdariffa* (roselle) leaf powder"
6. "A process for flavor essence from *Decalepis hamiltonii*/*Hemidesmus indica* roots".