

Brief Curriculum Vitae

1. **Name:** Dr. Sukumar Debnath
2. **Current Position and Address:** Department of Food Engineering, Chief Scientist & Prof. AcSIR, Head, Electrical Department (Incl. Air Conditioning & Refrigeration), CSIR-CFTRI, Mysore-570020, Karnataka, India, Tel: +91-821-2513910, Mob.: 9480379984, Email: debnath.cftri@csir.res.in, sdebnath70@gmail.com
3. **Educational Qualification:**

Sl No.	Degree/ Certificate	University/ Institute	Subjects
i.	Ph.D	University of Mysore	Biotechnology
ii..	M.Tech	Visvesvaraya Technological University	Engineering Management
iii.	B.Tech	Jadavpur University	Food Technology & Biochemical Engineering
iv.	B.Sc (Hons.)	University of Calcutta	Chemistry (Hons.), Physics, Mathematics, English
v..	Higher Secondary (12 th)	WBCHSE	Mathematics, Physics, Chemistry, English, Biology
vi.	Madhyamik (10 th)	WBBSE	Mathematics, Physical Science, Life Science, Bengali, English, Biology, History, Geography, W.E., P.E.

4. **Academic/Research Experience/Employment**

Sl No.	From	To	Name of Organization	Position held
i.	01 Sep 2021	Till Date	CSIR - Central Food Technological Research Institute (CFTRI), Mysuru	Chief Scientist
ii	01 Sep 1997	31 Aug 2002	CSIR - Central Food Technological Research Institute (CFTRI), Mysuru	Jr Scientist
vii.	20 Oct 1994	28 Aug 1997	Sant Longowal Institute of Engg. & Technology (SLIET), Longowal, Sangrur, Punjab - 148106, AICTE, MoE (formerly MHRD), Govt. of India	Lecturer

Visiting Research Scholar: Received Advance Training under *BOYSCAST Fellowship* funded by the Department of Science and Technology, New Delhi for one year (Apr 2006 - Mar 2007) under the guidance of Prof. R. Paul Singh, at the Department of Biological & Agricultural Engineering, University of California Davis, USA.

Industry:

Sl No.	From	To	Name of Organization	Position held
1.	01 Sep 1994	07 Oct 1994	Modern Food Industries (India) Limited (A Govt. of India Enterprise), Taratala, Calcutta, W.B.	Graduate/ Technical Apprentice Trainee (Vocational)

5. **Areas of Specialization:** *Food Technology and Biochemical Engineering.*
6. **Honors/Awards/Recognitions received:**

Honors/ Recognitions received:

- Served Co-opted Member of SERB Young Scientist Expert Committee - Life Sciences SERB, New Delhi (2017).
- Received invitation as a Guest of Honour by NIFTEM who organized the 2nd Conclave on MAKE IN INDIA programme - Standardization and mechanization of traditional Indian Food NIFTEM (2015).
- Served as Expert Member interacted with industry personnel at the State Conference organised by Madhya Pradesh Council of Science & Technology (MPCST) in collaboration with Industries, Innovators, Entrepreneurs, Facilitators, Academia (IEFA) MPCST and Industries, Innovators, Entrepreneurs, Facilitators, Academia (IEFA), Bhopal (2017).
- Obtained Food Safety Training Certificate (FOSTAC) for Eatright Campus at CSIR-CFTRI.
- Involved in conducting CFTRI One Week One Lab Campaign (OWOL) during 3-7 July 2023. Worked as Chairman for the session of “*Potential of Artificial Intelligence (AI) in Food Science and Technology- Expert Views*” and arranged Lecture by Eminent Speakers at CSIR-CFTRI, on 7th July 2023.
- Involved in CSIR *Swachh Bharat Mission Campaign 3.0*, Swachhata Pakhwada (Swachhata Action Plan, SAP-2024 & 2025) & Swachhata Hi Seva (Special Campaign 4.0, 2024 & 5.0, 2025) during May 2024 & May 2025 and Oct 2024 & Oct 2025 as Nodal Officer.
- Invited speaker in International Conference, organized by BIT, Mesra (10-12 July 2025).

Awards/Recognitions received:

- Received Young Scientist Award, bestowed by AFST (I), Mysore, Association of Food Scientists and Technologists (India) (2005).
- Received 2nd Prize in poster presentation in 5th International Food Convention (IFCON- 2003), held at CSIR-CFTRI, Mysore, India AFST(I), CSIR-CFTRI, Mysore (2003).
- Received Best Poster Award in 36th Annual Meet of Nutrition Society of India (NSI), held at CFTRI, Mysore, India Nutrition Society of India XXXVI Annual Meet (2004). I
- Received First Prize in XXI Indian Convention of Food Scientists and Technologists (ICFOST) and Suhana Golden Jubilee Jhakkaas Pachaas Best poster award on Innovations in Food Science and Technology to Fuel the Growth of the Indian Food Industry, held in Pune AFST(I), in association with CSIR-CFTRI, DFRL, FSSAI and MFPI and Suhana (2012).
- Received two Best Posters Awards in the 9th IFCoN 2023 held at CSIR-CFTRI, Mysore during 7-10 Dec 2023.

7. Professional Affiliations:

Sl No.	Name of Professional Body	Year of Membership	Grade of Membership	Membership Number
1.	Association of Food Scientists & Technologists (I), Mysuru	2000	Life Member	I/2000- 2001/L119
2.	Oil Technologists' Association of India, Southern Zone, IICT, Hyderabad	2011	Life Member	L -259

8. a) List of Research Publications including popular articles, if any;

Sl No.	Authors, Title, Journal, Vol., Issue, Month, Pages, Year, DOI
1.	Sukumar Debnath , J. Hemavathy and K.K. Bhat (2002). Moisture Sorption Studies on Onion Powder, <i>Food Chemistry</i> , 78, 479-482, 10.1016/S0308-8146(02)00161-9
2.	Jasim Ahmed, U.S. Shivhare and S. Debnath (2002). Colour degradation and rheology of green chilli puree during thermal processing, <i>Journal of Food Science and Technology</i> , 37 (1), 57-63, 10.1046/j.1365-2621.2002.00532.x

3.	Sukumar Debnath , K. K. Bhat and N. K. Rastogi (2003). Effect of pre-drying on kinetics moisture loss and oil uptake during deep fat frying of chickpea flour-based snack food, <i>LWT-Food Science and Technology</i> , 36(1), 91-98, doi.org/10.1016/S0023-6438(02)00186-X
4.	S. Debnath , J. Hemavathy, K. K. Bhat and N. K. Rastogi (2004). Rehydration characteristics of osmotic of pretreated and dried onion, <i>Food and Bioproducts Processing</i> , 82(.4), 304-310, 10.1205/fbio.82.4.304.56405
5.	Praveen Kumar D. G.; Umesh Hebbar H.; Sukumar Debnath and M. N. Ramesh (2005). Infrared and hot-air drying of onions, <i>Journal of Food Processing and Preservation</i> . 29 (2), 132-150, 10.1111/j.1745-4549.2005.00019.x
6.	T. R. Ramaprasad; V. Baskaran, Sukumar Debnath and B.R. Lokesh (2006) Shelf-life of spray-dried milk formulations supplemented with n-3 fatty acids, <i>Journal of Food Processing and Preservation</i> , 30 (3), 364-378, 10.1111/j.1745-4549.2006.00071.x
7.	Sukumar Debnath , N. K. Rastogi, A. G. Gopala Krishna and B. R. Lokesh (2009). Oil partitioning between surface and structure of deep-fat fried potato slices: A kinetic study, <i>LWT - Food Science and Technology</i> . 42 (6), 1054-1058, 10.1016/j.lwt.2009.01.006
8.	Sanjeet Kumar; H Umesh Hebbar and Sukumar Debnath (2009). Pulsed infrared roasting of groundnuts and its quality". <i>Int. J. Food Engineering</i> , .5 (04), .Article 8, 10.2202/1556-3758.1158
9.	Nasirullah, Sukumar Debnath and Varsha Bhargava (2009). A new approach to prepare omega-3 and omega-6 fatty acid rich glycerides from vegetable oils for value added food products, <i>Journal of Food Science and Technology</i> , 46(4), .374-376.
10.	Sukumar Debnath , Sriram Kumar Vidyarthi and R. Paul Singh (2010). Impact of blending of frying oils on viscosity and heat transfer coefficient at elevated temperatures, <i>Journal of Food Process Engineering</i> , 33(1), 144-161, 10.1111/j.1745-4530.2008.00265.x
11.	Sukumar Debnath , KSMS Raghavarao and B. R. Lokesh (2011). Hydrodynamic, thermo-analytical and molecular structural investigations of enzyme interesterified oil and its thermooxidative stability by thermogravimetric analysis, <i>Journal of Food Engineering</i> , 105 (4), 671-679, 10.1016/j.jfoodeng.2011.03.010
12.	Sukumar Debnath , R. Ravi and B. R. Lokesh (2011). Optimization of Lipase catalyzed interesterification reaction for modulating rheological and heat transfer properties of frying oil, <i>Food Chemistry</i> , 129 (4), 1444-1452, 10.1016/j.foodchem.2011.05.103
13.	Rekha, B. Sukumar Debnath , B. R. Lokesh and A.G. Gopala Krishna (2011). Oil uptake and thermal stability of some vegetable oils and fats during frying and heating, <i>Journal of Lipid Science and Technology</i> , 43 (2), 56-63.
14.	Sukumar Debnath , Maya Prakash and Belur R. Lokesh (2012). Lipase- mediated interesterification of oils for improving rheological, heat transfer properties and stability during deep-fat frying, <i>Food and Bioprocess Technology</i> , 5(5), 1630-1641, 10.1007/s11947-010- 0485-3
15.	Sukumar Debnath , N. K. Rastogi, A. G. Gopala Krishna and B. R. Lokesh (2012). Effect of frying cycles on physical, chemical and heat transfer quality of rice bran oil during deep-fat frying of poori: an Indian traditional fried food, <i>Food and Bioproducts Processing</i> , 90(2), 249-256, 10.1016/j.fbp.2011.05.001
16.	R. Baby Latha, Sukumar Debnath , C.V. Sarmandal, J. Hemavathy, Sakina Khatoon, A.G. Gopala Krishna and B.R. Lokesh (2014). Shelflife study of Indian traditional food based nutraceutical (oryzanol) enriched instant mixes Bhath-OZ and Upma –OZ, <i>Journal of Food Science and Technology</i> , 51(1), 124-129, 10.1007/s13197-011-0460-7
17.	Babatunde S. Ogunsina, T. N. Indira, A. S. Bhatnagar, C. Radha, S. Debnath and A. G. Gopala Krishna (2014). Quality characteristics and stability of Moringa oleifera seed oil of Indian origin, <i>Journal of Food Science and Technology</i> , 51(3), 503-510, 10.1007/s13197-011- 0519-5

18.	Niharika Shanker and Sukumar Debnath* (2015). Impact of dehydration of purslane on retention of bioactive molecules and antioxidant activity, <i>Journal of Food Science and Technology</i> , 52(10), 6631- 6638, 10.1007/s13197-015-1741-3
19.	Rahul Gangidi, Sukumar Debnath* (2015). Influence of edible oils, time, temperature, molecular groups on molecular iodine absorbance in visible region, <i>Annals. Food Science and Technology</i> , 16(2), 388- 398.
20.	Sheema Faiza, Nasirullah and Sukumar Debnath* (2016). Molecular finger printing of nutracoconut oil with improved health protective phytochemicals and its efficacy as frying medium, <i>Journal of the Americal Oil Chemical Society (JAOCS)</i> , 93(9), 1301-1310, 10.1007/s11746-016-2878-6
21.	Praneeth Juvvi, A. Chakkaravarthi, A. G. Gopalakrishna and Sukumar Debnath* (2016). Emerging technique for Healthier frying for production of reduced-fat beetroot (<i>Beta vulgaris</i>) chips, <i>Journal of Food Science and Technology</i> , 53(9), 3502-3511, 10.1007/s13197-016- 2326-5
22.	Niharika Shanker and Sukumar Debnath* (2016). Hypolipidemic Effect of Purslane (<i>Portulaca oleracea</i> L.) in Rats Fed on High Cholesterol Diet, <i>Journal of Nutrition & Food Sciences</i> , 1-8, 10.4172/2155- 9600.100557
23.	K. Das, S. Roy, S. Mandal, S. Pradhan, Sukumar Debnath , D. Ghosh and D.K Nandi (2016). Renal protection by isolated phytocompounds from <i>Terminalia arjuna</i> bark fraction on dehydration induced uremia, oxidative stress and kidney disease rats, <i>International Journal of Recent Scientific Research</i> ,7(10),13787-13795, https://recentscientific.com/sites/default/files/Article%20-6333.pdf
24.	Maneesh Kumar M., Sheema Faiza, Sukumar Debnath* (2017). Status of the bioactive phytochemicals during deep-fat frying of snack food using nutracoconut oil, <i>Journal of Food Science and Technology</i> , 54(11), 3689-3698, 10.1007/s13197-017-2833-z
25.	Maneesh Kumar M, K Prasad, T Sarat Chandra, Sukumar Debnath* (2018). Evaluation of physical properties and hydration kinetics of red lentil (<i>Lens culinaris</i>) at different processed levels and soaking temperatures, <i>Journal of the Saudi Society of Agricultural Sciences</i> , 17(3), 330-338, 10.1016/j.jssas.2016.07.004
26.	Niharika Shanker, Neha S. Berde, Govindaraju K & Sukumar Debnath* (2018). Efficacy of various methods of protein extraction from purslane suitable for proteome analysis, <i>International Journal of Research and Analytical Reviews</i> , 5(4), i451-i456
27.	Niharika Shanker, Maneesh Kumar, Praneeth Juvvi, Sukumar Debnath* (2019). Moisture sorption characteristics of ready-to-eat snack food enriched with purslane leaves, <i>Journal of Food Science Technology</i> . 56(4), 1918-1926, 10.1007/s13197-019-03657-1
28.	Niharika Shanker and Sukumar Debnath* (2019). Impact of purslane (<i>Portulaca oleracea</i> L.) leaves extract to enhance the anti-oxidant potential of edible oils during heating, <i>Journal of Oleo Science</i> , 68(4), 321- 328, 10.5650/jos.ess18126
29.	Juvvi P, Debnath S* (2020). Enzyme-assisted three phase partitioning: An efficient alternative for oil extraction from Sesame (<i>Sesamum indicum</i> L.), <i>Grasas y Aceites - Internatioal journal of fats and oils</i> , 1(71), e346, 1-12, 10.3989/gya.1060182
30.	Juvvi P, Selvi MK and Debnath S* (2020). Effect of vacuum frying on quality attributes of pear (<i>Pyrus communis</i> L) chips and blended oil, <i>Journal of Food Processing and Preservation</i> , 6 (44), e14488, 1-14, 10.1111/jfpp.14488
31.	Bhavana B.K., Sandeep N. Mudliar, V.V. Bokade and S. Debnath* (2022). Effect of furfural, acetic acid and 5-hydroxymethylfurfural on yeast growth and xylitol fermentation using <i>Pichia stipitis</i> NCIM 3497, <i>Biomass Conversion and Biorefinery</i> , 14 (4), p.4909-4923. 10.1007/s13399-022-02758-w
32.	Bhavana B.K., Sandeep N. Mudliar and S. Debnath* (2023). Life cycle assessment of fermentative xylitol production from wheat bran: A comparative evaluation of sulphuric acid and chemical-free wet air oxidation-based pretreatment, <i>Journal of Cleaner</i>

	<i>Production</i> , 423, 138666, https://doi.org/10.1016/j.jclepro.2023.138666
33.	Neha Naijo Areekal, A. Chakkaravarthi and Sukumar Debnath* (2024). Effect of microencapsulation on physical properties of powder developed from blended oils rich in PUFA, <i>Journal of Food Science and Technology</i> , https://doi.org/10.1007/s13197-024-05992-4
34.	Atreyee Bal, H.N. Shilpa, Sukumar Debnath , Navin Kumar Rastogi (2024). Extraction of anthocyanin from <i>Hibiscus rosa-sinensis</i> and concentration by forward osmosis membrane process, <i>Innovative Food Science and Emerging Technologies</i> , 96 (2024), 103782, https://doi.org/10.1016/j.ifset.2024.103782
35.	Neha Tanwar, Sandeep N. Mudliar, Roopavathi C, Prasanna Vasu and Sukumar Debnath* (2025). Effect of multipin atmospheric cold plasma treatment on color, capsaicin and microbial content of geographical indication-tagged <i>Byadagi chili</i> powder, <i>Journal of Food Engineering</i> , 392, 112494, 1-11, https://doi.org/10.1016/j.jfoodeng.2025.112494
36.	Neha Tanwar, B.K. Bhavana, Sandeep N. Mudliar, Praveena Bhatt, Prasanna Vasu and Sukumar Debnath* (2025). Comparative efficacy of cold plasma and ozone treatments in mitigating <i>Aspergillus flavus</i> and <i>Aflatoxin B1</i> in <i>Byadagi chili</i> , <i>Food Control</i> , 177, 111408, 1-11. https://doi.org/10.1016/j.foodcont.2025.111408
37.	Neha Tanwar, Sandeep N. Mudliar and Sukumar Debnath* (2025). Comparative and synergetic effects of cold plasma and ozone treatments on microbial safety, color stability, and quality of chili during long-term storage, <i>Postharvest Biology and Technology</i> , 230, 113806, 1-17, https://doi.org/10.1016/j.postharvbio.2025.113806

(* Corresponding Author)

b) List of best professional outputs/ outcomes in last 10 years, relevant to present field of specialization;

My research work encompasses various aspects of Bio and food processing, oil extraction, and the enhancement of nutritional properties in food products, natural antioxidants, design and development of machine, novel bioreactor design etc. and sustainable food production methods.

- i. *Design and development of Vacuum Frying System and technology to investigate the effect on quality attributes of fruit and vegetables and fried oil (Patent, Grant No. 513066, 21 Feb 2024; J Fd Sci Technol., 53(9), 3502-3511, 2016, 10.1007/s13197-016- 2326-5; J Fd Proc Pres, 6 (44), e14488, 1-14, 2020, 10.1111/jfpp.14488, process filed).*
- ii. *Extraction of anthocyanin from Hibiscus rosa-sinensis and concentration by forward osmosis membrane to develop natural colorants with potential health benefits (Innov Food Sci Emerg Technol, 96,103782, 2024, <https://doi.org/10.1016/j.ifset.2024.103782>).*
- iii. *Effect of microencapsulation on physical properties of powder developed from blended oils rich in PUFA, that has implications for food fortification and shelf-life enhancement (Patent, US20040191294A1, Granted, 30 Sep 2024; J Fd Proc Pres, 30 (3), 364-378, 2006, 10.1111/j.1745-4549.2006.00071.x; J Fd Sci Technol, 61, 2275-2286, 2024, <https://doi.org/10.1007/s13197-024-05992-4>; process filed)*
- iv. *Enzyme-assisted Three-Phase Partitioning that offer a potential alternative to conventional oil extraction techniques from Sesame (Grasas y Aceites, 1(71), e346, 1-12, 10.3989/gya.1060182).*
- v. *Purslane (Portulaca oleracea L.) leaves extract to enhance the antioxidant potential of edible oils during heating to improve the nutritional quality and stability of fried foods and its hypolipidemic effect in rats (J Fd Sci Technol., 52(10), 6631- 6638, 10.1007/s13197-015-1741-3; J Nutr Fd Sci, 1-8, 10.4172/2155- 9600.100557; Int J Res Anal Rev, 5(4), i451-i456; J Fd Sci Technol., 56(4), 1918-1926,10.1007/s13197-019-03657-1), J Oleo Sci, 68(4), 321-328, 10.5650/jos.ess18126).*
- vi. *Non-thermal (ozone, cold plasma) processing of spices for enhancing food safety and quality without compromising nutritional value (Journal of Food Engineering, 392, 112494, 1-11, 2024, <https://doi.org/10.1016/j.jfoodeng.2025.112494>; Food Control, 177, 111408, 1-11.*

<https://doi.org/10.1016/j.foodcont.2025.111408>; *Postharvest Biology and Technology*, 230, 113806, 1-17, <https://doi.org/10.1016/j.postharvbio.2025.113806>).

- vii. *Life cycle assessment (LCA) of fermentative xylitol production from wheat bran that uses chemical-free process and contributes to sustainable practices in food biotechnology (J Clean Prod*, 423, 138666, 2023, <https://doi.org/10.1016/j.jclepro.2023.138666>)

9. * Number of Books authored/edited:

Book Chapters:

Sl No.	Title	Authors	Publisher
1	Cold Storage of Potatoes in West Bengal – A Case Study, in ‘Storage and Transport of cut flowers & exotic fruits-vegetables for export’, p-125-150, 1999.	U. Ghosh, A. Bhattacharyya, S. Debnath, T. Pal, H. Gangopadhyay, D. R. Chaudhuri and P. K. Bose	Apollo Print Pack, Howrah, West Bengal
2	Heat and Mass Transfer in Foods during Deep-Fat Frying, Batters and Breadings in Food Processing, 2nd edition, edited by K. Kulp, Robert Loewe, K. Lorenz and J. Gelroth, AACC International Inc., p185-206, Doi: 10.1016/B978-1891127-71-7.50016-4, ISBN: 9780128104507, 2011	R. Paul Singh and Sukumar Debnath	AACC International Inc.
3	Infrared heating for Food Preservation, in ‘Emerging Technologies in Food Preservation’, edited by Santosh Kumar, Avik Mukherjee, Atanu Mitra and Dipankar Halder, p 311-330, 2023, ISBN :9780367675158, p 311-330, 2023, DOI: 10.1201/9781003147978	Sukumar Debnath* and H. Umesh Hebbar	CRC Press , Taylor & Francis Group
4	Advanced Computational Tools for Enhanced Food Quality and Safety, In book: Engineering Aspects of Food Quality and Safety, edited by Umesh Hebbar , Ram Saran Chaurasiya, , Shivendu Ranjan, Richa Sharma and KSMS Raghavarao, ISSN 1571-0297, p 207-247, 2023, 2023, DOI: https://doi.org/10.1007/978-3-031-30683-9	Bhavana BK, Sreevathsan S., Sukumar Debnath, Sandeep N. Mudliar	Springer

10. a) Number of Patents/Copy rights/Trade Mark/IPR granted/applied for & highlights of translational research contributions:

Sl No.	Title of Patent/ Copyrights	Identification Number/ Trade Mark	Inventor(s)	IPR Granted/ Applied
1	Health Composition	US20040191294A1	T R. Ramaprasad, V. Baskaran, Sukumar Debnath , K. Sambaiah, S.G. Jayaprakashan, M. Shiva Kumar, and B.R. Lokesh	Granted, 30 Sep 2004
2	An improved process for the roasting of groundnut kernels using pulsed infrared radiation	Grant No. 533015 1758/DEL/2007	Umesh Hebbar H., M.N. Ramesh and Sukumar Debnath	Granted, 20 Aug 2007
3	Vacuum Frying System	Grant No. 513066	Sukumar Debnath , Praneeth Juvvi and A. Chakkaravarth	Granted, 21 Feb 2024
4	A process for the preparation of soup powder formulation based on indian gooseberry (<i>Phyllanthus emblica</i>)	Grant No. IN 195797	Sukumar Debnath , Jayapal Hemavathy , Kodangala Keshava Bhat	Granted, 27 Mar 2002
5	A ready to use dry onion mix composition and process thereof	Grant No. IN226862 O2004/084653A1(WIPO PCT)	Sukumar Debnath , N.K. Rastogi, S.G. Jayaprakashan, K. K. Bhat and J. Hemavathy	Granted, 26 Mar 2003 07Oct 2007
6	Process for the retention of pungency during dehydration of feed	759/DELNP/2004 Grant No. 235749	Umesh Hebbar H., M. N. Ramesh and Sukumar Debnath	Granted, 24 Mar 2004
7	A formulation for preparation of ready- to-eat onion bar	726/DEL/2005 Grant No. IN260018	Sukumar Debnath , K.K. Bhat and J. Hemavathy and B.R Lokesh	Granted, 31 Mar 2005
8	A process for the production of ready- to-eat low fat potato snack	704/DEL/2007) Grant No. 361326	Umesh Hebbar H., Sukumar Debnath and K. K. Bhat	Granted 16 Mar 2021 Renewal Date 30 Mar 2023
9	A process for haziness and sediment free coconut and similar oils	809/DEL/2007 Grant No. 277564	B.S Shridhar, Sukumar Debnath , Jayapal Hemavathy and Ambale Gundappa Gopala Krishna	Granted 24 Nov 2016 Renewal Date 12 April 2024
10	Novel bioreactor design with internal-circulating draft tube impeller integrated with multi-optional pretreatment for enhanced biogas production from dairy fat sludge	(Filed to the patent Cell of CSIR-CFTRI)	Sandeep N Mudliar, Sukumar Debnath , Swaroopa Rani Dasari, Kopkar Lanjewar, Bhavana BK, Inchara Crasta, Sreevatsan S	(Filed to the patent Cell of CSIR-CFTRI)

b) Technologies developed, Licensed and/or commercialized with details.

Technologies developed: -06No.

c) Technology transferred / released and ECF generated: 100 No.

11. Dissertations supervised:

a) Ph.D. : Awarded-03, Ongoing- 04 No.

N.B.: Three research scholars received better job opportunities and hence relieved.

b) Post-Graduation : Awarded-15 No.

c) CSIR-800 Thesis/ Dissertation Guided for Ph.D Scholars along with Dr Sandeep N Mudliar: 07

d). Under Graduate students: 09

CSIR-RA Mentorship - I have done mentorship to a CSIR-RA (Dr Rahul Reddy Gangidi).

- ❖ **Seminars/Colloquium/Short-Term Courses/ Workshop Organized: 06 No.**
- ❖ **Papers/ Posters Presented in National/ International/ Seminar/ Conferences: 60 No.**
- ❖ **Professional Advanced Training Received/ Short-Term Courses Attended: 0.3 No.**
- ❖ **Seminar/ Conference/ Workshop Attended: 23 No.**
- ❖ **GAP/ Sponsored/ CNP Project Details: 09No as PI, 08 No.as Co-PI.**
- ❖ **Project worked as Lead Member: 14 No.**
- ❖ **Administrative/ Institute Support Work (HOD / In-Charge/Advisor/Coordinator): 04 No.**
- ❖ **Administrative/ Institute Support Work (Chairman/Convener/ Institute Academic Committees/ Nodal Officer / other activities/): 03 No.**
- ❖ **Administrative/Institute Support Work (Chairman and convener of different standing committee and special committee (ex officio status will not be considered), faculty in-charges of different units or equivalent) : 01 No.**
- ❖ **Administrative/Institute Support Work (Departmental activities identified by HOD like lab. In-charges, or department level committee): 01 No.**
- ❖ **Outreach Activities carried out: 15 No.**

I hereby declare that all the information mentioned above is true to the best of my knowledge.

Date:

Place: CSIR-CFTRI, Mysore

Signature of the Applicant

Sukumar Debnath