# **Biodata**

Name of Expert	Dr Ramesh Kumar Srivastava, FNASc		
Employee ID	690		
Designation	Principal Scientist & Head, Business Development Group		
Divisional Unit Name	Technology Dissemination and Computational Biology		
	Division (Business Development)		
Date of Birth	7 <sup>th</sup> July 1973		
Country of Citizenship/Residence	Indian		
Latest Photograph			
Official Address	CSIR-Central Institute of Medicinal and Aromatic Plants, PO-		
	CIMAP, Lucknow Pin: 226015		
Email Id (official & personal)	rksrivastava@cimap.res.in rks.lucknow@gmail.com		
Institute Contact Number (Epabx	0522-2718637, 8004743355		
No.) & Mobile Number			

### **Education:**

Degree(s) /Specialization	College / University	Year
Post Graduate Diploma in Agriculture Extension	MANAGE, Hyderabad	2013
Master in Business Administration (MBA)	Sikkim Manipal University	2011
Ph.D.	CSIR-CIMAP, Lucknow and Dr. RML University, Faizabad	2002
M.Sc.	Dr. RML University, Faizabad	1995
B.Sc.	Dr RML University, Faizabad	1993

# Area of Specialization (Maximum 500 words)

Medicinal and Aromatic Plants, Rural Development through Skill Development and Popularization of Cultivation and Processing of Medicinal and Aromatic Plants. Project implementation for upliftment of rural economy and creation of livelihood opportunities. Business Development through technology transfer of agro, processing and herbal formulations to MSMEs/start-ups related to aroma and herbal plants. More than 25 years experience on the area of Aromatic and Medicinal plants related technologies.

### **Employment record relevant to the assignment:**

	8			
Period	Employing organization and your	Country	Summary of activities performed relevant	
	title/position. Contact in		to the Assignment	
	references			
June 2019 -	<b>Employing Organization: CSIR-</b>	India	Dissemination of the technologies and	
Current	Central Institute of Medicinal		varieties developed by the institute to the	

	and Aromatic Plants, Lucknow Positon: Principal Scientist and Head (Business Development Group) Reference: Dr. Prabodh Kumar Trivedi, Director, CSIR-CIMAP Contact: 0522-2718637		<ul> <li>farmers and entrepreneurs</li> <li>Day to day interaction with the farmers and industries</li> <li>Collection, inventorization and analysis of the performance of the MAPs.</li> <li>State Nodal Scientist, NER, Aroma Mission</li> </ul>
June 2016 – June 2019	Employing Organization: CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow Positon: Senior Scientist and Head (Rural Development Unit) Reference: Dr. Prabodh Kumar Trivedi, Director, CSIR-CIMAP Contact: 0522-2718637	India	<ul> <li>Responsible for rural development activities like the dissemination of rural technologies among the farmers of India.</li> <li>Nodal Scientist of the utilization of offered flowers for the making of incense sticks by the women.</li> <li>Implemented the technology for utilization of flowers in more than 30 places of worship.</li> </ul>
June 2016 to June, 2015	Employer: Add. Secretary and Development Commissioner (MSME), GOI Positon: Asstt. Director Reference: Mr SV Shukla, Director, FFDC Contact: 9415334050	India	1. In R&D and planning: Researching on aromatic and medicinal plants for development of agro-technology in consideration with improvement of quality and yield. Planning different project in-house and sponsored for generation of revenue.  2. In extension work: organizing training programme for diverse level, Ksan Goshti, day-to-day interaction with farmers and entrepreneurs on aromatic and medicinal plant cultivation and processing.  3. Sponsored Project: Principal Investigator of two projects worth Rs. 99.54 lacs.
June 2002 to June 2015	Employer: Principal director, FFDC, Kannauj Positon:Extension Officer Reference: Mr SV Shukla, Director, FFDC Contact: 9415334050	India	<ul> <li>4. Revenue generation: Since joining to this centre generated more than 50% total revenue though projects, sale of planting materials/oils and consultancies.</li> <li>5. Over all responsible for managing farm, multiplication of planting materials, production of oils, and development/maintenance of campus.</li> <li>6. Publication: 3 papers; 3 technical bulletins; 3 training manual</li> </ul>

# **Membership in Professional Associations and Publications:**

- 1. Fellow, National Academy of Sciences, Allahabad
- 2. Member- Board of Studies, FRI University, Dehradun.
- 3. Member- Evaluation Board- NHB, NMPB, SIDO and DBT.
- 4. Life Member-Essential oil Association of India, New Delhi.
- 5. Life Member- Medicinal & Aromatic Plants Association of India, Anand.
- 6. Life Member, Indian Science Congress, Kolkata.
- 7. Life Member, National Academy of Science, Allahabad
- 8. Life Member, Indian Botanical Society, India

### Language Skills (indicate only languages in which you can work):

Language	Read	Write	Speak
English	Excellent	Excellent	Excellent
Hindi	Excellent	Excellent	Excellent
Awadhi	Excellent	Excellent	Excellent

### **Academic/Research Experience (provide bullet wise details)**

- Member, Board of Studies: P.G. diploma in Aroma Technology (FFDC-FRI)
- Associate Professor in AcSIR from 7.06 2019
- Organization of Skill Development activities to farmers and entrepreneurs
- Research on Extension activities of M&AP.
- Business Development Activities.

## **Honours & Awards (provide bullet wise details)**

- University Level Gold Medal in Botany from Dr. RML (Avadh) University, Faizabad U.P. in 1993.
- Best Poster Award In: National Seminar on the Research and Development in Aromatic Plants: Current Trends in Biology, Uses, Production and Marketing of Essential Oils, held at CIMAP, Lucknow.
- **Appreciation letter:** from Government of Gujarat (India) for popularization of cultivation and processing of industrial crops (medicinal and aromatic) among tribal people of tropical and subtropical region of India.
- **Best Evaluator award in** Flower Show at Agra (UP) in 2006
- STEM award (2019) for utilization of floral bio-resources into value added products.
- Best Paper Award (2019) in EOAI International Congress at Bangalore

### **Research Publications (provide bullet wise details)**

# **Research papers:**

- 1. Srivastava R.K., Singh A.K., Bansal R.P., Pal A., Khare P. Sharma R.S., Kumar S. and Kalra A. 2022. Innovative technique for management of offered floral bio-resources for protecting the environment and generating additional livelihood opportunities for women". *International Journal of Environment Science and Technology*. DOI: 10.1007/s13762-022-04021-1.
- 2. Ram Suresh Sharma, Yogesh Kumar, Rushikesh N. Bhise, H.P. Singh Choudhri, Deepak Kumar Verma, Ramesh Kumar Srivastava and Sanjay Kumar. (2022). Economics of Lemongrass Cultivation in Jharkhand State. *Economic Affairs*, **67**(4):505-510.
- 3. Ram Suresh Sharma, Yogesh Kumar, S.P. Singh, H.P. Singh Choudhri, Deepak Kumar, Rushikesh N. Bhise, R.K. Srivastava and Sanjay Kumar. (2022). Economics of Vetiver Cultivation: Increase in the Income of Household from Marginal Land in Madhepura District of Bihar. *Economic Affairs*, **67**(1Spl.): 59-64.
- 4. Ram Pravesh, RK Srivastava, RS Sharma, LP Yadav. (2022). Performance potential of high yielding varieties of menthol mint (*Mentha arvensis* L.) cultivation in the plains of Uttar Pradesh. *International Journal of Current Science (IJCSPUB)*, **12**(4): 59-63.
- 5. Kumar V, Singh N, Singh V, Sharma R, Singh A, Kumar R, Yadav MK, Shukla S, Kumar S, Sharma RS and Srivastava RK. (2021). Impact of different soil types of Bundelkhand region of India on vegetative growth and oil yield of lemongrass (*Cymbopogon flexuosus*) cv. Krishna. *Medicinal Plants* **13**(4): 621-625: doi: 10.5958/0975-6892.2021.00072.1

- 6. Srivastava, A. Gupta S., Swati Singh S., Verma RS, Srivastava RK, Gupta AK, Lal RK. (2021). Genetic Variability and Elite Line Selection for High Essential Oil and Nepetalactone Content in Catmint (*Nepeta cataria* L.), *American Journal of Plant Sciences*, 12, 1135 PP: 1154.
- 7. Yadav H., Kumar V., Sharma R.S., Shukla A., Srivastava R.K. (2021). Management of diseases, uses, biological and pharmacological activities of essential oil of basil (*Ocimum basilicum L.*) A review. *Journal of Medicinal and Aromatic Plants Science (JMAPS)*. **43**(1-2): 64-71.
- 8. Singh P. Agarwal S., Pal A., Chanotiya C.S., Khare P., Kumar D., Darokar M.P. and Srivastava R.K. (2021). Translational studies of aromatic essential oils for development of floor disinfectant formulations. *FAFAI Journal*. **22**(4): 89-93
- 9. Prakash P and Srivastava RK. (2020). Production and trade of menthol mint in India: Problems and prospects, Journal of Medicinal and Aromatic Plant Sciences (JMPAS), 42(3-4), 2020, PP: 200-204
- 10. Kumar V, Singh N, Singh V, Yadav MK and Srivastava RK. (2020). Introduction of improved cultivar of menthol mint (*Mentha arvensis*) in district Chhatarpur of MP for better yield and quality of essential oil. *Journal of Lipid Science and Technology*. **52**(1): 23-27.
- 11. Raj Y, Tandon S, Mittal G, Begum KMS and Srivastava RK. (2020). New Extraction Technologies, value addition and utilization of lemongrass (*Cymbopogon flexuosus*). *Journal of Medicinal and Aromatic Plant Sciences* **41**(1-4): 31-38.
- 12. Anil Kumar, Abhishek Niranjan, Alok Lehri, Shri Krishna Tewari, Devendra Vijay Amla, Sri Krishna Raj, Ramesh Srivastava & Shakti Vijay Shukla. (2015). Isotopic Ratio Mass Spectrometry Study for Differentiation Between Natural and Adulterated Essential Oils of Lemongrass (*Cymbopogon flexuosus*) and Palmarosa (*Cymbopogon martinii*). *Jour. of Essential Oil Bearing Plants* (Taylor & Francis Group) TEOP **18**(2): 368–373
- 13. Srivastava G and Srivastava RK. (2013). In-vitro studies of growth performance of scented rose (*Rosa damascena and R. centifolia*) *Indian Perfumer* **57**(1): 31-37.
- 14. Srivastava RK, Singh A and Shukla SV. (2013). Chemical Investigation and Pharmaceutical action of *Cyperus rotundus* A Review. *Jour. of Biological Product From Nature* (Taylor & Francis Group publication) TABP **3**(3): 166-172.
- 15. Srivastava RK and Raghav CS. (2006). Emerging trends in cultivation and processing of aromatic crops in tribal areas of Gujarat for boosting-up their socio-economic condition. *Indian Perfumer*.
- 16. Srivastava RK, Lehri A and Singh DP. (2005). Integration of aroma bearing crops with agriculture in tribal areas of Gujarat for uplifting rural economy A study. *FAFAI Journal*. Jan-Mar (63-69).
- 17. Singh AK, Srivastava RK, Kalra A, Bansal RP, Tomar VKS and Kumar S. (2003). New Practices in Cultivation of the Mint, *Mentha arvensis* in the Indo-Gangetic plains. *Experimental Agriculture* (*Cambridge University Press*) UK 39: 199-207.
- 18. Srivastava RK, Singh AK, Kalra A, Tomar VKS, Bansal RP and Kumar S. (2003). Influence of age and literacy level of farmers on adoption of mint based crop rotations in the Indo-Gangetic plains. *J. Med. Aro. Pl. Sci.* **25**: 689-697.
- 19. Kalra A, Gupta AK, Katyar N, Srivastava RK and Kumar Sushil (2002). Screening of fennel (*Foeniculam vulgare*) accessions for early maturity and high seed and essential oil yields. *Ind. J. Agril Sci.* **72**(2):74-75.
- 20. Srivastava RK, Singh AK, Kalra A, Bansal RP, Tomar VKS, Patra DD, Naqvi AA, Chand S, Sharma S and Kumar Sushil. (2002). Characteristics of menthol mint *Mentha arvensis* L. crop cultivated on industrial scale in the Indo-Gangetic plains. *Industrial Crops and Products*, USA 15:189-198.
- 21. DD Patra, Anwar A, Chand S, Chattopadhyay A, Prasad A, Pandey P, Kumar A, Singh A, Srivastava RK, Krishna A, Singh V, Tomar VKS, Bansal RP, Singh AK, Singh K, Bahl JR and Kumar S. (2001). Use of mint essential oil as an agrichemical: Control of N-loss in crop fields by using mint essential oil coated urea as fertilizer. *Current Science* **81**(12): 1526-1528.
- 22. Kalra A, Gupta AK, Katiyar N, Srivastava RK and Kumar S. (2001). Screening of *Coriandrum sativum* accessions for seed and essential oil yield and early maturity. *Plant Genetic Resource News Letter*, FAO. Italy **19**:19-21.
- 23. Kumar Sushil, Srivastava RK, Singh AK, Kalra A, Tomar VKS, Bansal RP. (2001). Higher yields and profits from new crop rotations permitting integration of mediculture with agriculture in the Indo-Gangetic plains. *Current Science* **80**:563-566.
- 24. Srivastava RK, Singh AK, Bansal RP, Kalra A, Bahal JR, Tomar VKS, Patra NK, Kumar S. (2000). Adoption of improved varieties of menthol mint (*Mentha arvensis*) Himalaya and Kosi in Uttar Pradesh. *J. Med. Aro. Pl. Sci.* 22: 470-473.

25. Srivastava RK, Singh AK, Kalra A, Bansal RP, Tomar VKS, Bahl JR, Sharma S and Kumar Sushil. (2000). Optimum crop age of menthol mint *Mentha arvensis* cv. Kosi crops in the Indo-Gangetic plains for high yields of menthol rich essential oil. *J. Med. Aro. Pl. Sci.* 22: 771-773.

#### **Research Articles:**

- 1. Singh J, Srivastava RK, Singh AK, Kumar S. (2001). Futuristic scenario in production and trade of major medicinal plants of India. *J. Med. Aro. Pl. Sci.* 22 & 23: 564-571.
- 2. Singh J, Srivastava RK, Singh AK, Kumar S. (2000). Current status of production and trade of major essential oils. *J. Med. Aro. Pl. Sci.* 22: 723-731.
- 3. Singh J, Bagchi GD, Srivastava RK, Singh AK. (2000). Pharmaceutical aspects of aromatic herbs and their aroma chemicals. *J. Med. Aro. Pl. Sci.* 22: 732-738.
- 4. Singh AK, Srivastava RK, Kumar Sushil. (1999). Production and trade of menthol. *FAFAI J.* April June, 1999 (28 –32).
- 5. Singh AK, Srivastava RK, Tomar VKS, Kumar S. (1997). Some important aromatic crops and their distillation system. (in Hindi). *Udamita Samachar (MP)*; Sep. 1997. p-(15-18).

### **Review Articles:**

- 1. Kumar VS, Srivastava RK, Krishna A, Tomar V K S, Singh A K, Kumar S (2000). Cultivation, chemistry, biology and utilization of Bach (Acorus calamus). J. Med. Aro. Pl. Sci. 22: 338-348.
- 2. Srivastava R K, A Singh, G P Srivastava, A Lehri, A Niranjan, S K Tewari, K Kumar and S Kumar. (2014). Chemical Constituents and Biological Activities of Promising Aromatic Plant Nagarmotha (*Cyperus scariosus* R.Br.). *Proc Indian Natn Sci Acad* 80(3): pp. 525-536.

### **Book Chapters (provide bullet wise details)**

1. Srivastava R. K., Kumar S. and Sharma R.S. (2019) Ocimum as a promising commercial crop, The Ocimum Genome. Springer (Switzerland), 978-3-319-97429-3.

## **Book Published**

**1.** "Cultivation and Uses of Aromatic Plants" By RK Srivastava, SV Shukla and SS Dagar; Published By IBDC.© Authors; 2009.

# Published Monographs/Technical Bulletins (provide bullet wise details)

- 1. Nagarmotha (*Cyprus scariosus*) Cultivation and Distillation Technology: (2015). Kamlesh Kumar, Dr. RK Srivastava & S.V. Shukla. Published FFDC, Kannauj.
- 2. Motha (*Cyprus rotundus*) Cultivation and distillation technology: (2015). Kamlesh Kumar Dr. RK Srivastava & SV Shukla. Published by FFDC, Kannauj.
- 3. Menthol mint Cultivation and Distillation (2006). Dr RK Srivastava & Dr. CS Raghav. Published by Director, FFDC, Kannauj.
- 4. Rose Cultivation and Distillation (2006). Dr CS Raghav, Dr RK Srivastava & PC Singh. Published by Director, FFDC, Kannauj.
- 5. Cultivation and primary distillation of Lemongrass. (2003). Dr RK Srivastava. Published by Director, FFDC, Kannauj.
- 6. Improved cultivation practices and post harvesting technologies of Safed Musli (*C. borivilianum*). (2003). Dr RK Srivastava. Published by Director, FFDC, Kannauj India.
- 7. Cultivation and processing of Indian Basil. (2003) Dr. RK Srivastava and KN Dwivedi. Published by Director, FFDC, Kannauj.

### Patents (provide bullet wise details):

- 1. "An efficient method for the faster multiplication of earthworm and production of superior quality vermin-compost from the distillation waste of industrial aromatic crops" No- USPTO-PP 6488733 and India- 396/2000. (Commercialized to farmers and Self Help Group under Rural Development Programme)
- 2. A Method and System for extraction of Consistent Fragrance and Oils from Composite Floral Waste; Patent Application No. 199/DEL/2014; 22.1.2014. (Commercialized to Women Self Help Group for creation of livelihood and minimize the pollution in and around places of worship. We have also trained more than 4500 women and un-employed youth for making incense sticks and fragrant cones in various parts of the country)

# **Details of on-going projects**

Sl. No	Title of Project	Project Cost (Rs	Sponsoring Agencies	Responsibility
		in lakh)		
1.	Popularization of improved varieties of menthol mint through improved cultivation practices and post-harvest technologies for higher yield and quality of mint essential oil in districts Sambhal, and Amroha of UP	69.89	Arora Aromatics Private Limited	Principal Investigator (PI)
2.	Providing technical advisory services in the pilot project of Medicinal and Aromatic Plants for enhancement of the farmers' income in the state of Assam	47.05	ARIAS Society (APART)	Principal Investigator (PI)
3.	Awareness programme on improved cultivation practices and efficient market discovery of Menthol mint.	85.00	MCX, Mumbai	Principal Investigator (PI)
4.	Design and development of tractor mounted Mentha reaper with CSIR-CMERI	11.00	CSIR	Nodal
5.	National Aroma Mission Project	2959.50	CSIR	State Nodal – NER
6.	Enabling Tribal farmers for enhancement of agriculture income through organization of awareness programme on cultivation and processing of suitable aromatic crops	5.00	NASI (DST)	PI
7.	Demonstration of Cultivation, Processing and Value Addition of Selected Aromatic Crops in Bundelkhand region	246.80	DBT	PI
8.	Cultivation and processing of suitable aromatic crops in triabl areas of Vidarbha, Maharashtra	5.03	Avantha Agritech, Gurgoan	PI
9.	Enabling Tribal farmers of NER (Assam, Meghalaya, Nagaland and Manipur) for enhancement of agriculture income through Organization of Awareness Programme on cultivation and processing of suitable aromatic crops	6.12	NASI	PI
10.	Preparation of DPR for the establishment of centre of excellence for medicinal and aromatic plants at Dimapur, Nagaland	5.00	Bio Resource Mission, Govt. of Nagaland	PI
11.	Providing consultancy for designing, fabrication and setting up of 06 (six) stainless	47.73	INR, MBDA Meghalaya	Co-PI

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	steel (SS) directly fired type field distillation			
	units of 500 kg/batch capacity for essential oils			
	based on CSIR-CIMAP knowhow & design.			
12.	Development of Agarwood oil based high value	15.00	NCE,	Co-PI
	Medicinal and Aromatic Products		Department	
			of Forest,	
			Govt. of	
			Tripura	
13.	Organization of training programmes on	19.68	Department	Co-PI
	cultivation, primary processing and marketing		of	
	of medicinal and aromatic plants suitable for		Horticulture,	
	Uttar Pradesh		Govt. of	
			Uttar	
			Pradesh	
14.	Training programme on cultivation, processing	7.82	JSLPS, Govt.	Co-PI
17.	and marketing of economically important	7.02	of Jharkhand	C0-11
	Aromatic and Medicinal crops suitable for		Of Thankhana	
	Jharkhand State			
15.	Skill-cum- technology up-gradation programme	90.00	SIDBI	Co-PI
13.		90.00	SIDBI	C0-F1
	on cultivation and primary processing of economically important medicinal and aromatic			
	* <u>*</u>			
16.	plants.	72.00	Govt. of	Co-PI
10.	Consultancy and technical guidance for	72.00		C0-P1
	cultivation, primary processing, marketing of		Jharkhand	
	medicinal and aromatic crops suitable for			
1.	Jharkhand State.	) (DY 02	CONTR	G 77
17.	Dissemination of medicinal and aromatic plants	MPL-03	CSIR-	Co-PI
	related technologies for socio-economic gains.		CIMAP	
18.	Training programme on cultivation and	4.50	TERI, New	Co-PI
	processing of MAPs		Delhi	
19.	International training cum exposure visit on	9.00	Govt. of	Co-PI
	Cultivation, processing and marketing of MAPs		Nepal	
			*	
	suitable for Nepal		•	
20.	Special Training Prgramme on MAPs for	2.50	MANAGE,	CO-PI
	•		MANAGE, Hyderabad	
20.	Special Training Prgramme on MAPs for	2.50 2.50	MANAGE, Hyderabad Govt. of	CO-PI
	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad		MANAGE, Hyderabad Govt. of Bihar and	
	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA,	2.50	MANAGE, Hyderabad Govt. of	
	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA,		MANAGE, Hyderabad Govt. of Bihar and	
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.	2.50	MANAGE, Hyderabad Govt. of Bihar and	Co-PI
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance	2.50	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.	
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and	2.50	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.	Co-PI
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central	2.50	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation	Co-PI
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.	2.50	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs	Co-PI
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint	2.50	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation	Co-PI  Member
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint and its performance evaluation at farmers'	2.50	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs	Co-PI  Member
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint and its performance evaluation at farmers' field.  Skill-cum- technology up-gradation programme	2.50 20.58	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs Mumbai	Co-PI  Member  Member
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint and its performance evaluation at farmers' field.  Skill-cum- technology up-gradation programme on cultivation and primary processing of	2.50 20.58	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs	Co-PI  Member
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint and its performance evaluation at farmers' field.  Skill-cum- technology up-gradation programme on cultivation and primary processing of economically important medicinal and aromatic	2.50 20.58	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs Mumbai	Co-PI  Member  Member
21. 22. 23. 24.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint and its performance evaluation at farmers' field.  Skill-cum- technology up-gradation programme on cultivation and primary processing of economically important medicinal and aromatic plants.	2.50 20.58 10.00 53.00	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs Mumbai	Co-PI  Member  Member
21.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint and its performance evaluation at farmers' field.  Skill-cum- technology up-gradation programme on cultivation and primary processing of economically important medicinal and aromatic plants.  International training programme on	2.50 20.58	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs Mumbai  SIDBI  Govt. of	Member  Member  CO-PI
21. 22. 23. 24.	Special Training Prgramme on MAPs for participants selected by MANAGE, Hyderabad Special Training programme on MAPs, ATMA, Bihar and U.P.  Providing consultancy and technical guidance for cultivation and processing of medicinal and aromatic plants suitable for Hardoi and Central U.P. region.  Promotion of newly developed varieties of mint and its performance evaluation at farmers' field.  Skill-cum- technology up-gradation programme on cultivation and primary processing of economically important medicinal and aromatic plants.	2.50 20.58 10.00 53.00	MANAGE, Hyderabad Govt. of Bihar and Govt. of U.P.  HCL Foundation  Jindal Drugs Mumbai	Co-PI  Member  Member

S. No.	Project Title and Responsibilities	Sanctioned/ Submitted to	Project Cost (Rs in lacs)	Duration
1.	Introduction of Aromatic crops in Tribal areas of Gujarat, <b>P.I.</b>	Department of Tribal Development, Govt. of Gujarat	85.25	2003-2007
2.	Training-cum Demonstration Programme for Cultivation and Processing of novel medicinal plant Safed Musli Chlorophytum borivilianum P.I.	National Medicinal Plant Board, New Delhi	6.00	2003-2005
3.	Training-cum-Field Demonstration on Nursery preparation, Cultivation and Processing of Commercially Viable Medicinal and Aromatic Plants in Dholpur District of Rajasthan, <b>P.I.</b>	National Medicinal Plant Board, New Delhi	9.50	2005-2007
4.	Development of Model Nursery of Aromatic Plants, <b>P.I.</b>	National Horticulture Mission, UP	18.00	2009-2011
5.	Value-chain of North Eastern aromatic Plants, Co-PI	National Agriculture Innovation ProjectICAR	71.00	2009-2012
6.	Organization of five day awareness programme (5 events) on cultivation, primary processing and product development of aromatic plants at Kannauj <b>P.I.</b>	National Horticulture Board, Gurgoan	5.00	20011-12
7.	Collection, Inventorization, Quality Assesment and Commercialization of Nagarmotha (Cyperous scariosus) and Motha (Cyperus scariosus), <b>P.I.</b>	Department of Biotechnology (DBT), New Delhi	35.28	2011-2013
8.	Introduction of cat mint (Napeta cataria) in India <b>P.I.</b>	Entamol LLC, Florida, US	5.00	2013-14

### **Technologies developed (provide bullet wise details):**

- CIM-Evergreen (Healthy Aging Tea)
- CIM-RespCool (Essential oil based Aroma diffuser for anti-microbial activities)
- CIM-Sudha (Herbal Scrub for rejuvenation of skin)

# 1. Technologies transferred (provide bullet wise details)

- Technology Transferred for Utilization of flowers at temples and ghats of Haridwar for making incense sticks and fragrant cones. M/s Raibaar Samiti, Laldhang, Haridwar, Uttarakhand
- Technology Transferred for Utilization of flowers at temples and of Delhi and NCR for making incense sticks and fragrant cones. M/s. Recycle Aastha LLP, Delhi
- Technology Transferred for Making of Relexomap-pain relieving oil. M/s. Nandan Impex Pvt. Mumbai
- Technology Transferred for Making of Painzaa. M/s. Nandan Impex Pvt. Mumbai
- Technology Transferred for Making of Acne Preventive Face wash. M/s. Nandan Impex Pvt. Mumbai
- Technology Transferred for Making of PainChhoo. M/s. Nandan Impex Pvt. Mumbai
- Technology Transferred for Making of Flomop. M/s. Nandan Impex Pvt. Mumbai
- Technology Transferred for Utilization of flowers at temples of Maa Vaishno Devi and other peripheral temples for making incense sticks and fragrant cones. Shri Mata Vaishno Devi Shrine Board Katra J&K through Chief Executive Officer, SMVDSB

- Technology Transferred for Making of Sanitary Pad by Women Self Help Group. Jansewa Foundation, Loni, Ahmed Nagar
- Technology Transferred for making of Utilization of flowers at temples of Mahakal and other temples for making incense sticks and fragrant cones. Ekas Social Welfare Organization, Indore Road, Ujjain (MP)
- Technology Transferred for making of Hand Sanitizer liquid/gel. M/s Rako Agrochem Pvt. Ltd., Lucknow
- Technology Transferred for making of Hand Sanitizer gel/liquid. M/s Innovative Concepts Lucknow, UP
- Technology Transferred for making of Hand Sanitizer gel/liquid. M/s. Hapi Key Hyderabad (Telangana)
- Technology Transferred for making of Hand Sanitizer gel/liquid. M/s. Sai International Lucknow, UP
- Technology Transferred for making of Hand Sanitizer gel/liquid. M/s. Asear Medicare, Lucknow, U.P.
- Technology Transferred for Making of Hand Sanitizer gel/liquid. M/s. Vyom India Organics Private Limited, B- 346 Rajendra Nagar, Bareilly-243122, U.P.
- Technology Transferred for Making of Mosquito repellent spray (Mospray). M/s. Vyom India Organics Private Limited, Bareilly, U.P.
- Technology Transferred for Making of Clean Germ (Floor Cleaner). M/s. Vyom India Organics Private Limited, B- 346 Rajendra Nagar, Bareilly-243122, U.P.
- Technology Transferred for making of Mospray-Mosquito repellent spray. M/s. MAA DURGA MARKETING, F-36,37 Industrial Area Ramnagar Chandauli, UP
- Technology Transferred for making of Relaxomap. M/s. Hapi Key 44/1/6, Phase-1,I.D.A., Jeedimetla, Hyderabad-500055
- Technology Transferred for Making of flower based incense sticks and fragrant cone from offered flowers. M/s. Green Dream Bharat, 83 B, Maheba Purab Patti, Naini, Prayagraj
- Technology Transferred for Making of Immunity booster Tea (Evergreen Tea). M/s. Vyom India Organics Private Limited, B- 346 Rajendra Nagar, Bareilly-243122, U.P.
- Technology Transferred for Making of Herby soft Shampoo. M/s. Vyom India Organics Private Limited, B- 346 Rajendra Nagar, Bareilly-243122, U.P.
- Technology Transferred for making of Geranium Active (Anti- dandruff Shampoo). M/s Vyom India Organics Private Limited, B- 346 Rajendra Nagar, Bareilly-243122, U.P.
- Technology Transferred for making of Kleenzie (Aloe vera based face wash). M/s Vyom India Organics Private Limited, Bareilly (UP)
- Technology Transferred for Making of Immunity Booster based on Kalmegh CIM-Megh. M/s Meghdoot Gramodyog Seva Sansthan, Lucknow (UP)
- Technology Transferred for Making of incense sticks from offered flowers. Aadarsh Shiksha Evam Seva Samiti, Gonda
- Technology Transferred for making Hand Sanitizer gel/liquid. M/s. Prahava India Private Limited , Ghaziabad, Uttar Pradesh
- Utilization of flowers offered at Temples of Dehradun for making incense sticks under CSIR Aroma Mission Phase-II. Jagrati Foundation, 50/55 Jhanda Bazaar, Dehradun
- Utilization of flowers offered at Temples of Nashik, Maharashtra for making incense sticks under CSIR Aroma Mission Phase-II. Shri Sai Institute of Rural Development, Varanasi (Uttar Pradesh)
- Utilization of flowers offered at Temples of Nashik, Maharashtra for making incense sticks under CSIR Aroma Mission Phase-II. Anand Foundation, Nashik Maharashtra
- Technology Transferred for Agro-Technology package for cultivation of Milk thistle (CIM-Sil). M/s. Umalaxmi Organics Pvt. F-245-249, Agro food Park Boranada Jodhpur-342001 Rajasthan
- Technology Transferred for making of Sanitary Pad. M/s. AN Health Care, East Godavari, Andhra Pradesh
- Technology Transferred for making of Pain reliving oil (Relaxomap). M/s Ayukart Ayurvdic Pvt. Ltd. Jaipur
- Technology Transferred for making of CIM-Kesh oil to M/s Ayukart Ayurvdic Pvt. Ltd. Jaipur
- Technology Transferred for making of Sanitary Pad to M/s Natural Resources, Shillong, Meghalaya
- Technology Transfer M/s Prakriti Divine Incense, Garoli Kalan, Near Shiv Mandir, Sector 37D, Gurugram, Haryana
- Technology Transfer of CIM-Phalse and Cough Syrup to M/s Deshavari Global Pharmaceticals LLP, Mohali

• Technology Transferred for making of Sanitary Pad to M/s. Ecobhumi Bioagri Concepts Pvt. Ltd., Kolkata

# Research Scholars (provide details):

- Dr. (Mrs.) Kalpana Katiyar (Ph.D Thesis Award in 2023)
- Mr. DK Purushottam (Ph.D Student Thesis submitted 2023)
- Mr. Himanshu Yadav (Ph.D Student on-going)
- Mr. Manoj Kumar Yadav (Ph.D Student on-going)
- Mrs. Priyanka Singh (Ph.D. Student on-going)
- Mr. Vipin Kumar (Ph.D. Student on-going)
- Mr. Abhisekh Pratap Singh (Ph.D. Student on-going)

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