

R&D Projects 2003-2022 (Updated on 11 April, 2022)

S. No.	Principal Investigator	Title	Duration	Funding Agency	Amount (Rs in Lacs)	Completed/ Ongoing
1	Dr. S. Naik	Cytogenetic evaluation, molecular characterization and improvement of some promising cultivars of turmeric and ginger through biotechnological methods	2003-2006	DST	10	Completed
2	Dr. Sudhir Kumar	Development of a bioremedial system for diesel contaminated sites in South-Western areas of H.P.	2005-2008	DST	2.5	Completed
3	Dr. C. Tandon	Biomolecules from Tamarind indicus and Terminalia arjuna influencing Mineralization/ Demineralization processes and their role in management of renal calculosis	2006-2009	DST	18	Completed
4	Dr. P.K. Naik	Study of population structure of Podophyllum hexandrum using biochemical and molecular markers	2006-2009	DST	14	Completed
5	Dr. Sudhir Kumar	Development of technologies for bioconversion of lignocellulosic waste from herbal industries for developing commercially viable products	2007-2009	AyurVet Ltd.	5	Completed
6	Dr. R.S.Chauhan	Bioprospecting of buckwheat (Fagopyrum tataricum) for novel genes & metabolites of medicinal and nutritional importance	2007-2011	DBT	40.6	Completed
7	Dr. R.S.Chauhan	Development of candidate gene markers for Jatropha by utilizing genome resources of castor bean	2007-2011	DBT	59.5	Completed
8	Dr. R.S.Chauhan	Identification of low curcumin genotypes of Jatropha and their utilization in developing candidate gene markers	2008-2011	DRDO	19.2	Completed
9	Dr. Sudhir Kumar	Development of a bioleaching strategy for sustainable disposal and recycling of electronics-waste	2008-2011	MoE	19.7	Completed
10	Dr. C. Tandon	Development of a standardized herbal product for urolithiasis from Tribulus terrestris and Achyranthes aspera	2009-2011	DBT	26.2	Completed
11	Dr. Uday Bhanu	Formulation of an antidepressant/stress reliever drug based on St John's Wort (Hypericum perforatum)	2009-2012	DRDO	15	Completed

12	Dr. C. Tandon	Exploring the role of matrix protein(s) from calcium oxalate stones in nephrolithiasis and assessment of their molecular interactions with calcium oxalate monohydrate (COM) crystals in silico	2009-2011	ICMR	8.4	Completed
13	Dr. RS Chauhan	Identification of genetically superior strains of medicinal plants (P. kurroa and Valeriana jatamanshi) from North-Western Himalayas of India	2009-2012	Ministry of Health, GOI	16.5	Completed
14	Dr. C. Rout	Computational Identification, Evaluation and in vivo Validation of Vaccine Candidates from Bioweapon Toxins, and Selected Potential Bacterial Bioweapons (PBBWs)	2010-2012	DRDE	9.4	Completed
15	Dr. P.K. Naik	Genetic characterization, chemical profiling and optimization of parameters for Artemisinin yield in Artemisia annua from the Ladakh region	2010-2012	DRDO	9.5	Completed
16	Dr. S. Tandon	The potential of human embryonic stem cells in developmental toxicity testing	2010-2012	DBT	17.2	Completed
17	Dr. Gargi Dey	Production of Nutrabeverages from Mahua Flowers	2010-2012	TRIFED	7	Completed
18	Dr. RS Chauhan	Elucidating missing links in the biosynthetic pathways of major medicinal constituents for utilization in the development of gene markers	2010-2015	DBT	198.7	Completed
19	Dr. Manu Sharma	Antioxidants and Lantadene A Hybrid compounds as anticancer agents	2010-2013	DBT	7.6	Completed
20	Dr. Manu Sharma	Design, synthesis and evaluation of Lantadene polyphenol conjugates as anticancer agents.	2010-2013	DST	12	Completed
21	Dr. C. Tandon	Identification and functional characterization of proteins as key/rate-limiting enzymes in the biosynthesis of desired chemical constituents of target plant species	2010-2015	DBT	60.7	Completed
22	Dr. P.K. Naik	Identification of intermediate metabolites for linking missing links in the biosynthetic pathways of desired chemical constituents in target plant species	2010-2015	DBT	68.65	Completed

23	Dr. Hemant Sood	Identification of elite chemotypes and optimization of differential accumulation conditions for major & desired chemical constituents of three medicinal plants species	2010-2015	DBT	60	Completed
24	Dr. Poonan Sharma	Physico-chemical studies of drug-surfactant interactions in aqueous alcoholic solutions	2011-2013	DST	6.4	Completed
25	Dr. Gopal Singh Bisht	Design, synthesis and evaluation of antibacterial peptidomimetics	2011-2014	DST	18	Completed
26	Dr. Harvinder Singh	Nucleotide diversity in granule bound starch synthase-I (GBSS-I) metabolic pathway genes and its association with starch quality in elite Indian rice genotypes	2011-2014	DST	16	Completed
27	Dr. P.K. Naik	Toxicological evaluation of herbal formulations: (a) herbal performance enhancing capsules (PerfoMax), (b) herbal adaptogenic appetizer, (C) herbal tea and (D) seabuckthron oil based soft gel capsule	2012-2013	DRDO	8.5	Completed
28	Mr. Dipankar Sengupta	Development of Business Intelligence Model of Army Personnel's at Higher Altitude	2012-2014	DRDO	9.9	Completed
29	Dr. Tiratha Raj Singh	Structural, functional and evolutionary analysis of repair pathways with special relevance to human disease	2012-2015	DST	12.48	Completed
30	Dr. Manu Sharma	Polyunsaturated fatty acids and Lantadene A conjugates as selective tumor targeting agents	2012-2015	ICMR	22	Completed
31	Dr. C. Tandon	Characterization of the antilithiatic proteins from Tamarindusindica and Terminaliaarjuna and evaluation of their cytoprotective role on oxalate-induced renal tubular epithelial cell injury	2012-2015	DST	50	Completed
32	Dr. Harvinder Singh	Genetic analysis to avoid inbreeding of the endangered western tragopan in the aviaries of Himachal Pradesh	2012-2015	DST	11.2	Completed
33	Dr. GL Gupta	Development of a polyherbal preparation to treat ethanol abstinence syndrome.	2012-2015	DST	24.85	Completed
34	Dr. Mamta Raghav	Probiotics to prevent infection of Cronobacter sakazakii in neonatal mouse model	2012-2015	DBT	42.15	Completed
35	Dr. Gunjan Goel	Development of a multicompartement in vitro model of the human gastrointestinal tract	2012-2015	DBT	45.4	Completed

36	Dr. Akank Jain	Ramanujan Fellowship	2012-2017	DST	73	Completed (Shifted)
37	Dr. RS Chauhan	DST-FIST	2012-2017	DST	150	Completed
38	Dr. Anil Kant	Identification and validation of sex linked markers in seabuckthorn	2013-2015	DRDO	10	Completed
39	Dr. Simran Tandon	Establishment of an assay using human embryonic stem cell derived cardiac precursors from KIND2 cells for cytotoxicity testing	2013-2015	DBT	45.67	Completed
40	Dr. RS Chauhan	Development of Gene Markers for High Seed Oil Content and Dissecting Molecular Basis of Female Flower Development in <i>J. curcas</i> Towards its Genetic Improvement for High Seed Yield	2013-2016	DBT	120	Completed
41	Dr. Gunjan Goel	Novel quorum sensing modulators against biofilm forming <i>Cronobacter sakazakii</i>	2013-2016	DST	23.5	Completed
42	Dr. C. Tandon	Mass spectrometric identification of matrix protein(s) from calcium oxalate stones in nephrolithiasis and assessment of their activity on calcium oxalate crystal-mediated stress in renal epithelial cells	2013-2016	ICMR	17	Completed
43	Dr. Jitendraa Vashistt	Identification, characterization of diarrhoeagenic pathogens in Himachal Pradesh	2013-2016	ICMR	16	Completed
44	Dr. Jayashree Ramana	Comparative genomics of diarrheal pathogens to identify vaccine candidates and study of various antibiotic resistance mechanisms.	2013-2016	DST	23.11	Completed
45	Dr. Harish Changotra	Identification of Single Nucleotide Polymorphisms in the transcriptional regulatory region of autophagy gene, ULK1 and their role in susceptibility to chronic hepatitis B virus infection	2013-2016	DBT	18	Completed
46	Dr. Manju Jain	Investigating the role of thymus in mediating host immune modulation in visceral leishmaniasis	2013-2016	DST	27	Completed (Shifted)
47	Dr. Harish Changotra	Autophagy genes (Atg16L1 and IRGM) single nucleotide polymorphisms in the susceptibility of chronic hepatitis B virus infection	2013-2016	DST	23	Completed

48	Dr. C. Tandon	Development of herbal product for urolithiasis from <i>Tribulus terrestris</i>	2013-2016	DBT	52.23	Completed
49	Dr. Rahul Shrivastava	Identification of Macrophage Invasion Protein(s) of Atypical Mycobacteria <i>M. fortuitum</i> as Potential Drug Target and Inhibitors Thereof	2013-2017	DST	17.4	Completed
50	Dr. C. Rout	Development of inhibitors to target glyoxylate and methylcitrate cycles essential for persistence of <i>Mycobacterium tuberculosis</i>	2013-2016	ICMR	36	Completed
51	Dr. Gunjan Goel	Development of an in vitro gut model to study the survival of probiotics in mixed microbial consortia	2013-2016	DBT	34.5	Completed
52	Dr. Sudhir Kumar	Bioremediation of electronic waste (E-waste) for precious metal recovery and removal of polybrominated diphenyl ethers (PBDE's)"	2013-2017	DBT	33.2	Completed
53	Dr. Gunjan Goel	Elucidating the linkage between key limiting processes and	2014-2016	Indo-Russian	24	Completed
54	Dr. Anil Kant	Transcriptome analysis of seabuckthorn male and female flowers	2015-2017	DRDO	10	Completed
55	Dr. Hemant Sood	Molecular Dissection of Biosynthesis of Pharmacologically Important Phenol Glycosides in a High Value Medicinal Plant (<i>Rhodiola imbricata</i>) from Trans- Himalayan Region of Ladakh	2015-2017	DRDO	10	Completed
56	Dr. Gopal Singh Bisht	Synthesis of novel poly-N-substituted glycines (peptoids) based on cell selective antimicrobial peptides for Gram-negative bacterial infections	2015-2018	ICMR	24	Completed
57	Dr. Hemant Sood	Socio Economic upliftment of high altitude farmers of Himachal Pradesh through transfer of micro-propagation technologies for high value medicinal herbs	2015-2018	DST	14.5	Completed
58	Dr. Jitendraa Vashistt	Identification of biofilm associated proteins of multidrug resistant <i>Acinetobacter baumannii</i> as potential drug target and inhibitors thereof.	2015-2018	DST	23.3	Completed

59	Dr Tiratha Raj Singh	A Bioinformatic and experimental approach to investigate the interaction between acetylcholinesterase (AChE) and angiotensin-converting-enzyme (ACE) along with Alzheimer's disease associated proteins.	2015-2018	ICMR	25.66	Completed
60	Dr. Gunjan Goel	Microbial interventions for generating renewable bio-energy in Himachal Pradesh using Pine needle forest litter	2016-2018	SCSTE, HP	5.9	Completed
61	Dr. Sudhir Kumar	Biogas production for sustainable energy generation in rural H.P. using one-stage portable digester	2016-2018	SCSTE, HP	7.87	Completed
62	Dr. R. S. Chauhan (till 2017)Dr. Hemant Sood (Since 2017)	Functional analysis and validation of picosides biosynthetic pathway and development of gene markers for elite chemotypes of <i>Picrorhiza kurroa</i>	2016-2020	DBT	350	Completed
63	Dr. Poonam Sharma	Physico-chemical study of flavonoid-surfactant interaction: Utilization in neomycin topical formulation	2017-2020	DST	22.51	On going
64	Dr. Udayabanu Malairaman	To investigate the effect of <i>Urtica dioica</i> on maternal diabetes induced neuronal dysfunction in the offspring	2018-2020	ICMR	6	On going
65	Dr. Tiratha Raj Singh	Identification, Inhibition mechanism analysis and validation of novel multi-target inhibitors for Alzheimer's disease using polypharmacology and systems pharmacology approaches	2019-21	ICMR	14.208	On going
66	Dr. Sudhir Kumar	DBT Skill Vigyan Project	2019-2022	DBT	49.8	On going
67	Dr. Anil Kant	DBT GAT-B Support for M. Sc. Biotechnology	2020-25	DBT	Sanctioned	On going
68	PI: Prof. Sudhir Kumar Co-PI : Prof. Ashish Kumar	Pine needles conversion to biofuel for rural empowerment	2022-2024	Jaypee Innovation Research Fund	7.8	On going
69	PI: Dr. Ashok Kumar Nadda Co- PI : Dr. Poonam Sharma	Extraction of keratin from poultry waste biomass of and its application in the production of value added products	2022-2024	Department of Environment Science and Technology, Shimla Himachal Pradesh	7.6	On going