

RESEARCH PROJECT @ JUIT

S. No.	Department	Project	Funding agency	Duration	Grant (Rs. In Lakh)	Status
1	Biotechnology and Bioinformatics	Cytogenetic evaluation, molecular characterization and improvement of some promising cultivars of turmeric and ginger through biotechnological methods	DST	2003-06	9.64	Completed
2	Biotechnology and Bioinformatics	Development of a bioremedial system for diesel contaminated sites in South-Western areas of H.P.	DST	2005-08	2.40	Completed
3	Biotechnology and Bioinformatics	Biomolecules from Tamarind indicus & Terminalia arjuna influencing Mineralization/ Demineralization processes and their role in management of renal calculosis	DST	2006-09	18.00	Completed
4	Biotechnology and Bioinformatics	Study of population structure of Podophyllm hexandrum using biochemical and molecular markers	DST	2006-09	14.00	Completed
5	Biotechnology and Bioinformatics	Development of technologies for bioconversion of lignocellulosic waste from herbal industries for developing commercially viable products	AyurVet Ltd.	2007-09	5.00	Completed
6	Biotechnology and Bioinformatics	Bioprospecting of buckwheat (Fagopyrum tataricum) for novel genes & metabolites of medicinal and nutritional importance	DBT	2007-11	40.60	Completed
7	Biotechnology and Bioinformatics	Development of candidate gene markers for Jatropha by utilizing genome resources of castor bean	DBT	2007-11	59.50	Completed
8	Biotechnology and Bioinformatics	Development of a bioleaching strategy for sustainable disposal and recycling of electronics-waste	MoE	2008-11	19.70	Completed
9	Biotechnology and Bioinformatics	Identification of low curcun genotypes of Jatropha and their utilization in developing candidate gene markers	DRDO	2008-11	19.14	Completed
10	Biotechnology and Bioinformatics	Development of a standardized herbal product for urolithiasis from Tribulus terrestris and Achyranthes aspera	DBT	2009-11	26.16	Completed
11	Biotechnology and Bioinformatics	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	ICMR	2009-11	8.40	Completed
12	Biotechnology and Bioinformatics	Formulation of an antidepressant/stress reliever drug based on St John's Wort (Hypericum perforatum)	DRDO	2009-12	15.00	Completed
13	Biotechnology and Bioinformatics	Network Project on " Population assessment and identification of superior genetic stock of Picorhiza kurrooa & Valeriana jatamansi by screening different populations from N.W. Himalayas (HP & Uttarakhand)	Ministry of Health, GOI	2009-12	16.50	Completed
14	Biotechnology and Bioinformatics	Computational Identification, Evaluation and in vivo Validation of Vaccine Candidates from Bioweapon Toxins, and Selected Potential Bacterial Bioweapons (PBBWs)	DRDO	2010-12	9.35	Completed
15	Biotechnology and Bioinformatics	Genetic characterization, chemical profiling and optimization of parameters for Artemisinin yield in Artemisia annua from the Ladakh region	DRDO	2010-12	9.50	Completed
16	Biotechnology and Bioinformatics	Production of Nutrabeverages from Mahua Flowers	TRIFED	2010-12	7.00	Completed
17	Biotechnology and Bioinformatics	The potential of human embryonic stem cells in developmental toxicity testing	DBT	2010-12	19.46	Completed
18	Biotechnology and Bioinformatics	Antioxidants and Lantadene A Hybrid compounds as anticancer agents	DBT	2010-13	7.61	Completed

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19	Biotechnology and Bioinformatics	Elucidating missing links in the biosynthetic pathways of major medicinal constituents for utilization in the development of gene markers	DBT	2010-15	198.62	Completed
20	Biotechnology and Bioinformatics	Identification and functional characterization of proteins as key/rate-limiting enzymes in the biosynthesis of desired chemical constituents of target plant species	DBT	2010-15	60.70	Completed
21	Biotechnology and Bioinformatics	Identification of elite chemotypes and optimization of differential accumulation conditions for major & desired chemical constituents of three medicinal plants species	DBT	2010-15	70.80	Completed
22	Biotechnology and Bioinformatics	Identification of intermediate metabolites for linking missing links in the biosynthetic pathways of desired chemical constituents in target plant species	DBT	2010-15	68.65	Completed
23	Physics & Material Science	Design of Ultralow Sidelobe Level Microstrip Antenna Array in X-Band	Directorate of ER&IPR	2010-2013	20.65	Completed
24	Pharmacy	Design, synthesis and evaluation of Lantadene A – antioxidant conjugates as anticancer agents	DST	2010-2013	11.98	Completed
25	Biotechnology and Bioinformatics	Physico-chemical studies of drug-surfactant interactions in aqueous alcoholic solutions	DST	2011-13	6.39	Completed
26	Biotechnology and Bioinformatics	Structural, functional and evolutionary aspects of repair pathways with special relevance to human disease	DST	2011-13	12.48	Completed
27	Electronics & Communication Engg.	Design and analysis of frequency selective surface at Ka/Ku Band for reflection and S Band for transmission	ISRO	2011-14	15.96	Completed
28	Biotechnology and Bioinformatics	Design, synthesis and evaluation of antibacterial peptidomimetics	DST	2011-14	19.15	Completed
29	Biotechnology and Bioinformatics	Nucleotide diversity in granule bound starch synthase-I (GBSS-I) metabolic pathway genes and its association with starch quality in elite Indian rice genotypes	DST	2011-14	10.50	Completed
30	Biotechnology and Bioinformatics	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	DRDO	2012-13	8.49	Completed
31	Biotechnology and Bioinformatics	Development of Business Intelligence Model of Army Personnel's at Higher Altitude	DRDO	2012-14	9.90	Completed
32	Electronics & Communication Engg.	Fabrication of energy Harvesting Prototypes using Piezoelectric Materials	DRDO	2012-14	9.68	Completed
33	Biotechnology and Bioinformatics	Characterization of the antilithiatic proteins from Tamarindusindica and Terminaliaarjuna and evaluation of their cytoprotective role on oxalate-induced renal tubular epithelial cell injury	DST	2012-15	50.35	Completed
34	Biotechnology and Bioinformatics	Development of a multicompartiment in vitro model of the human gastrointestinal tract	DBT	2012-15	45.40	Completed
35	Biotechnology and Bioinformatics	Development of a polyherbal preparation to treat ethanol abstinence syndrome.	SERB, DST	2012-15	19.09	Completed
36	Biotechnology and Bioinformatics	Genetic analysis to avoid inbreeding of the endangered western tragopan in the aviaries of Himachal Pradesh	SERB, DST	2012-15	11.20	Completed
37	Biotechnology and Bioinformatics	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	DBT	2012-15	18.00	Completed

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38	Biotechnology and Bioinformatics	Probiotics to prevent infection of Cronobacter sakazakii in neonatal mouse model	DBT	2012-15	42.15	Completed
39	Biotechnology and Bioinformatics	Fund for improvement of Science & Technology Infrastructure (DST-FIST)	DST	2012-17	150.00	Completed
40	Biotechnology and Bioinformatics	Ramanujan Fellowship: The molecular mechanisms of transcription inhibition and DNA damage incl. by triplex forming oligonucleotides in cancer.	SERB, DST	2012-17	73.00	Completed
41	Mathematics	Investigation on residual life time and inactivity time of coherent systems.	National Board for Higher Mathematic	2012-2015	9.62	Completed
42	Pharmacy	Polyunsaturated fatty acid and anticancer drug conjugates as selective tumor targeting agents	ICMR	2012-2015	18.51	Completed
43	Physics & Material Science	Shared Aperture Microstrip Antenna Array for L and S Band	CSIR	2012-2015	16.40	Completed
44	Physics & Material Science	Synthesis of Magnetite Nanoparticles on Substrates for Water Purification	SERB, DST	2012-2015	11.82	Completed
45	Biotechnology and Bioinformatics	Establishment of an assay using human embryonic stem cell derived cardiac precursors from KIND2 cells for cytotoxicity testing	DBT	2013-15	45.67	Completed
46	Biotechnology and Bioinformatics	Identification and validation of sex linked markers in seabuckthorn	DRDO	2013-15	9.91	Completed
47	Biotechnology and Bioinformatics	Autophagy genes (Atg16L1 and IRGM) single nucleotide polymorphisms in the susceptibility of chronic hepatitis B virus infection	SERB, DST	2013-16	21.60	Completed
48	Biotechnology and Bioinformatics	Bioremediation of electronic waste (E-waste) for precious metal recovery and removal of polybrominated diphenyl ethers (PBDE's)"	DBT	2013-16	33.20	Completed
49	Biotechnology and Bioinformatics	Comparative genomics of diarrheal pathogens to identify vaccine candidates and study of various antibiotic resistance mechanisms.	DST	2013-16	23.11	Completed
50	Biotechnology and Bioinformatics	Development of Gene Markers for High Seed Oil Content and Dissecting Molecular Basis of Female Flower Development in J. curcas Towards its Genetic Improvement for High Seed Yield	DBT	2013-16	97.31	Completed
51	Biotechnology and Bioinformatics	Development of herbal product for urolithiasis from Tribulus terrestris	DBT	2013-16	52.23	Completed
52	Biotechnology and Bioinformatics	Development of inhibitors to target glyoxylate and methylcitrate cycles essential for persistence of Mycobacterium tuberculosis	ICMR	2013-16	18.62	Completed
53	Biotechnology and Bioinformatics	Identification of Macrophage Invasion Protein(s) of Atypical Mycobacteria M. fortuitum as Potential Drug Target and Inhibitors Thereof.	SERB, DST	2013-17	16.45	Completed
54	Biotechnology and Bioinformatics	Identification, characterization of diarrhoeagenic pathogens in Himachal Pradesh	ICMR	2013-16	16.00	Completed
55	Biotechnology and Bioinformatics	Investigating the role of thymus in mediating host immune modulation in visceral leishmaniasis	SERB, DST	2013-16	24.50	Completed
56	Biotechnology and Bioinformatics	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	ICMR	2013-16	16.86	Completed
57	Biotechnology and Bioinformatics	Novel quorum sensing modulators against biofilm forming Cronobacter sakazakii	SERB, DST	2013-16	23.50	Completed
58	Civil Engineering	Effect of stream-wise spacing of circular bridge piers on flow characteristics and local scour	SERB, DST	2013-2016	9.88	Completed

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59	Biotechnology and Bioinformatics	Elucidating the linkage between key limiting processes and microorganisms during anaerobic degradation of lignocellulosic waste	DST & Russian Foundation for Basic Res.	2014-16	23.98	Completed
60	Biotechnology and Bioinformatics	A Bioinformatic and experimental approach to investigate the interaction between acetylcholinesterase (AChE) and angiotensin-converting-enzyme (ACE) along with Alzheimer's disease associated proteins	ICMR	2014-17	25.66	Completed
61	Physics & Material Science	Development of spin-based semiconductor nano-electronic devices using ferromagnetic Silicide nanorods	DST-JSPS (Indo-Japan)	2014-2016	7.20	Completed
62	Physics & Material Science	Development, characterization & processing of quantum dots for imaging in near infrared (NIR) range	SERB, DST	2014-2017	24.80	Completed
63	Electronics & Communication Engg.	Mathematical modeling of spectrum sharing technology in cognitive radio networks.	ISRO	2015-17	11.10	Completed
64	Electronics & Communication Engg.	Reliability Modeling and Optimized Planning of Risk-based Resilient Networks	DST	2015-17	9.04	Completed
65	Biotechnology and Bioinformatics	Molecular dissection of biosynthesis of pharmacologically important phenol glycosides in a high value medicinal plant (Rhodiola imbricata) from trans-Himalayan Region of Ladakh	DRDO	2015-17	9.80	Completed
66	Biotechnology and Bioinformatics	Synthesis of Novel Poly-N substituted Glycines (Peptoids) based on Cell selective Antimicrobial Peptides for Gram Negative and Gram Positive Bacterial Infections	ICMR	2015-18	24.10	Completed
67	Biotechnology and Bioinformatics	Socio-economic upliftment of high altitude farmers of Himachal Pradesh through transfer of micro-propagation technologies for high value medicinal herbs	SEED-DST	2015-18	14.16	Completed
68	Biotechnology and Bioinformatics	Identification of biofilm associated proteins of multidrug resistant Acinetobacter baumannii as potential drug target and inhibitors thereof.	DST	2015-18	23.30	Completed
69	Physics & Material Science	Semiconducting chalcogenide quantum dots for exploiting the power of solar energy	SERB, DST	2015-18	16.99	Completed
70	Biotechnology and Bioinformatics	Transcriptome analysis of seabuckthron male and femal flower buds "DIHAR/01/CARS/2015)	DRDO	2015-16	9.99	Completed
71	Computer Science & Engineering	Early Forest Fire Detection System using WSN and IOT for HP Mountains	SCSTE	2016 -18	6.18	Completed
72	Biotechnology and Bioinformatics	Biogas production for sustainable energy generation in rural HP using one stage portable digester	SCSTE	2016 -18	7.87	Completed
73	Biotechnology and Bioinformatics	Microbial Interventions for generating renewable bio-energy in Himachal Pradesh using Pine needle forest litter	SCSTE	2016 -18	5.80	Completed
74	Biotechnology and Bioinformatics	Physico-chemical Study of Flavonoid -Surfactant Interaction: Utilization in Neomycin Topical Formulation	SERB, DST	2017-20	22.50	Completed
75	Physics & Material Science	Formation of Room Temperture Ferrita Thin for the Applications of Sepintronic Devices.	DST-DAAD	2017-19	11.72	Completed
76	Computer Science & Engineering	IOT enabled fencing system to control moneky menance in Shimla (urban areas of HP)	HIMCOSTE	2017-19	7.50	Completed
77	Physics & Material Science	Catalytic nanoparticle based graphene devices for the selective detection of industrial gases	HIMCOSTE	2017-19	7.98	Completed
78	Physics & Material Science	Hydrogen storage using 2D chalcogenide and graphene layered materials	SERB, DST	2017-20	32.22	Completed
79	Physics & Material Science	Enhancing the thermal stability of Chalcogenide Phase-change materials for switching and memory applications	SERB, DST	2017-20	20.06	Completed

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80	Computer Science & Engineering	Identification of Diseases of Tomato Using Image Processing Techniques for the Farmer of Himachal Pradesh with Feedback System Using IoT and Android Application	HIMCOSTE	2017-19	9.96	Completed
81	Electronics & Communication Engg.	Design and analysis of a thermoelectric generator for energy harvesting system from waste heat for the state of HIMACHAL PRADESH	HIMCOSTE	2017-18	5.24	Completed
82	Civil Engineering	Chief Minister's Startup/ Innovation Projects (TIEDC)	Dept of Industries, H.P.	2017-20	77.53	On going
83	Biotechnology and Bioinformatics	Identification, inhibition mechanism analysis and validation of novel multitarget inhibitors for Alzheimer's disease using polypharmacology and Systems pharmacology approaches	ICMR	2019-22	14.50	Completed
84	Biotechnology and Bioinformatics	DBT Skill Vigyan	HIMCOSTE	2019-22	49.80	Completed
85	Civil Engineering	Geological Hazard mitigation using stone concrete block retaining wall and helical soil nailing	DDMA, Solan	2021-22	25.00	On going
86	Biotechnology and Bioinformatics	P.G. Teaching Program	DBT	2020-25	130.00	On going
87	Biotechnology and Bioinformatics	Extraction of keratin from poultry waste biomass and its application in the production of value added products	HPR&DP	2021-23	7.60	On going
88	Computer Science & Engineering	S&T Communication Research for Community Knowledge Sharing Informatics and Risk Communication based on Blockchain Technology	NCSTC	2022-24	34.87	On going
89	Biotechnology and Bioinformatics	Synthesis and physicochemical characterization of ethosomes as an effective carrier for transdermal delivery of antifungal agents.	SERB, DST	2022-24	30.25	On going
90	Computer Science & Engineering	Development and promotion of crop surveillance system for forecasting leaf diseases and protection against wild animals using Artificial Intelligence and IoT	HIMCOSTE	2023-25	6.20	On going
91	Biotechnology and Bioinformatics	CO ₂ -phillic nanotextured surface immobilized enzymes for expedited microalgal biomass production through CO ₂ enrichment and production of eco-friendly pigments	HIMCOSTE	2023-25	6.80	On going
92	Physics & Material Science	Development of ZnO based nano-generator for small electrical devices	HIMCOSTE	2023-25	6.55	On going
93	Computer Science & Engineering	IT based intervention to enhance access to quality care at the door step to improve adherence of care and reduce adverse events in patients with CVD in model district Shimla	HIMCOSTE	2023-25	5.80	On going