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Admin (HBM)

No. BT/PR45190/NER/95/1902/2022
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi – 110 003

Dated: 21/03/2022

ORDER

Sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the implementation of the project entitled: "Process optimization and up-scale production of lignocellulosic extremozymes from Himalayan microbes for biomass valorization/depolymerization" under Himalayan Bioresource Mission for a period of 3 years at a total cost of ₹ 4,26,68,840.00 (Rupees Four Crores Twenty-Six Lakhs Sixty-Eight Thousand Eight Hundred and Fourty Only) on the terms and conditions detailed here under:

2 The Project:

2.1 Title: Process optimization and up-scale production of lignocellulosic extremozymes from Himalayan microbes for biomass valorization/depolymerization

2.2 Details of the Investigators:

Principal Investigators (PIs):

1. Dr. Dharam Singh, Principal Scientist, Department of Biotechnology, CSIR-Institute of Himalayan Bioresource Technology (IHBT), Post Box No. 6, Palampur – 176061, Himachal Pradesh
2. Dr. Sudesh Kumar, Scientist F, Department of Biotechnology, DBT-Centre of Innovative and Applied Bioprocessing (CIAB), Sector-81 (Knowledge City), PO Manauli, S.A.S. Nagar, Mohali – 140306, Punjab
3. Prof. Kamal Dev, Faculty of Applied Sciences and Biotechnology, Shoolini University of Life Sciences and Business Management (SULSBM), Oachghat-Kumarhatti Highway, Bajhol, Solan – 173229, Himachal Pradesh
4. Dr. Amit Kumar Rai, Scientist C, Microbial Resources Division, DBT-Institute of Bioresources and Sustainable Development (IBSD), Tadong, Gangtok – 737102, Sikkim
5. Dr. Ruqeya Nazir Shiekh, Sr. Assistant Professor, Centre of Research for Development, University of Kashmir, Hazratbal, Srinagar – 190006, J&K
6. Dr. Tulika P Srivastava, Associate Professor, School of Basic Sciences, Indian Institute of Technology (IIT), Mandi – 175005, Himachal Pradesh

Co-PIs:

1. Dr. Arun Kumar, Senior Scientist, Dept. of Biotechnology, CSIR-IHBT, Palampur
2. Dr. Sarita Devi, Scientist, Dept. of Biotechnology, CSIR-IHBT, Palampur
3. Dr. Upendra Sharma, Senior Scientist, Chemical Technology Division, CSIR-IHBT, Palampur
4. Er. Mohit Sharma, Senior Scientist, Chemical Technology Division, CSIR-IHBT, Palampur

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5. Dr Meena Krishania, Research and Innovation System Analyst R&D, Department of Food processing, DBT-CIAB, Mohali
6. Prof. Anuradha Sourirajan, Dean, Faculty of Applied Sciences and Biotechnology, SULSBM, Solan
7. Dr. S. Indira Devi, Scientist-D, DBT-IBSD, Takyelpat Institutional Area, Imphal – 795001, Manipur

2.3 Objectives:

1. Evaluation of lignocellulolytic activity for Cellulases, Hemicellulases, and Oxido-reductases from potential leads-based isolates for optimum activity, and bioinformatics assisted identification of novel lignocellulolytic extremozymes.
2. Process optimization for production of above enzymes using selected potential isolates.
3. Demonstration of biomass valorization/depolymerization using above enzymes.
4. Up-scale (5-22 L) production and partial purification of above enzymes from identified isolates and enzymes cocktail for biomass processing.

2.4 Time Schedule: The duration of the project is 3 years from the date of this sanction order.

2.5 Project Cost: The total cost of the project is ₹ 4,26,68,840.00 (Rupees Four Crores Twenty-Six Lakhs Sixty-Eight Thousand Eight Hundred and Fourty Only) as per details given below:

Institute	Year I	Year II	Year III	Total Cost (₹)
1. CSIR-IHBT, Palampur	5488240	5038240	4538240	15064720
2. DBT-CIAB, Mohali	3799600	2451600	2303440	8554640
3. SULSBM, Solan	3068520	1703520	1607200	6379240
4. DBT-IBSD, Imphal	2052520	1603520	1403520	5059560
5. University of Kashmir, Srinagar	2361520	1011520	911520	4284560
6. IIT, Mandi	1530760	1221760	573600	3326120
Total (₹)	18301160	13030160	11337520	42668840

Institute wise details:

Budget Head	Year I	Year II	Year III	Total (₹)
1. CSIR-IHBT, Palampur				
Manpower	2838240.00	2838240.00	2838240.00	8514720.00
Consumables	2500000.00	2000000.00	1500000.00	6000000.00
Travel	50000.00	50000.00	50000.00	150000.00
Contingency	50000.00	100000.00	100000.00	250000.00
Overhead	50000.00	50000.00	50000.00	150000.00
Total (₹)	5488240.00	5038240.00	4538240.00	15064720.00
2. DBT-CIAB, Mohali				
Equipment	1048000.00			1048000.00
Manpower	1101600.00	1101600.00	1153440.00	3356640.00
Consumables	1500000.00	1200000.00	1000000.00	3700000.00
Travel	50000.00	50000.00	50000.00	150000.00
Contingency	100000.00	100000.00	100000.00	300000.00
Total (₹)	3799600.00	2451600.00	2303440.00	8554640.00

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3. Shoolini University of Life Sciences & Business Management, Solan				
Equipment	1265000.00			1265000.00
Manpower	803520.00	803520.00	907200.00	2514240.00
Consumables	800000.00	700000.00	500000.00	2000000.00
Travel	50000.00	50000.00	50000.00	150000.00
Contingency	100000.00	100000.00	100000.00	300000.00
Overhead	50000.00	50000.00	50000.00	150000.00
Total (₹)	3068520.00	1703520.00	1607200.00	6379240.00
4. DBT-IBSD, Imphal				
Equipment	299000.00			299000.00
Manpower	803520.00	803520.00	803520.00	2410560.00
Consumables	800000.00	700000.00	500000.00	2000000.00
Travel	50000.00	50000.00	50000.00	150000.00
Contingency	100000.00	50000.00	50000.00	200000.00
Total (₹)	2052520.00	1603520.00	1403520.00	5059560.00
5. University of Kashmir, Srinagar				
Equipment	1200000.00			1200000.00
Manpower	431520.00	431520.00	431520.00	1294560.00
Consumables	600000.00	450000.00	350000.00	1400000.00
Travel	30000.00	30000.00	30000.00	90000.00
Contingency	50000.00	50000.00	50000.00	150000.00
Overhead	50000.00	50000.00	50000.00	150000.00
Total (₹)	2361520.00	1011520.00	911520.00	4284560.00
6. Indian Institute of Technology, Mandi				
Equipment	499000.00			499000.00
Manpower	401760.00	401760.00	453600.00	1257120.00
Consumables	500000.00	700000.00		1200000.00
Travel	30000.00	20000.00	20000.00	70000.00
Contingency	50000.00	50000.00	50000.00	150000.00
Overhead	50000.00	50000.00	50000.00	150000.00
Total (₹)	1530760.00	1221760.00	573600.00	3326120.00

2.6 Equipment: The details of equipment sanctioned for the implementation of the project are at Annexure-I.

2.7 Manpower: The details of the manpower sanctioned for implementation of the project are at Annexure-II.

3. Head of Account:

The Non-Recurring expenditure involved is debitable to:

Demand No. 89	Department of Biotechnology
3425	Other Scientific Research 2021-2022
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development

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3425.60.200.29.17	Assistance to Research and Development
3425.60.200.29.17.35	Grants for creation of capital assets

The Recurring expenditure involved is debitable to:

Demand No. 89	Department of Biotechnology
3425	Other Scientific Research 2021-2022
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance to Research and Development
3425.60.200.29.17.31	Grants -in-Aid General

4. Terms & Conditions:

4.1 The Non-Recurring items must be procured and installed within 18-months of the sanction of the project, failing which the PIs have to return the remaining/unutilized non-recurring grant with 10% of Interest. In case the amount of grant-in-aid is refunded, the whole or a part amount of the grant, with an interest at 10% per annum there on shall be recovered. The other terms and conditions governing this sanction are attached at Annexure- III.

4.2 The expenditure by the implementing agency is to be incurred only through the EAT module of PFMS.

4.3 A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institution on non-judicial stamp paper ₹ 100/- in the enclosed format and the second release/installment will be made only after signing of MoA between the grantee institutions and DBT. In case of NGO's and Private Institution's, execution of MOA is mandatory before first release. A format of the MoA is enclosed in Annexure-IV

4.4 The Institute/Agency will keep the whole of the grant in a Bank Account earning interest, and the interest so earned should be reported to DBT in the Utilisation Certificate and Statement of Expenditure. The interest earned should be remitted to the Consolidated fund of India through Bharat Kosh portal (www.bharatkosh.gov.in) as per GFR-2017-230(8) after finalization of the account for a given Financial Year.

5. No International Travel will be undertaken from the sanctioned project grant unless specified otherwise.

6. The Director, CSIR-IHBT, Palampur, Himachal Pradesh and The CEO, DBT-CIAB, Mohali, Punjab and The Registrar, Shoolini University, Anand Campus, The Mall, Solan, Himachal Pradesh and The Director, DBT-IBSD, Imphal, Manipur and The Dean Research, University of Kashmir, Jammu, J&K and The Registrar, Indian Institute of Technology, Mandi, Himachal Pradesh would be responsible for submission of Statements of Expenditure (SoE), utilization certificates (UC), Assets Certificates, Manpower staffing & expenditure details in prescribed DBT formats to DBT in respect of grants released in this project from time to time.

7. PI's of DBT sponsored projects can consider appointment of JRF from Category-II merit list of DBT-BET exam so that candidates can be paid fellowships at par with NET/GATE/BET qualified

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Dr. Vandana Singh, Director
CSIR-IHBT, Palampur
Himachal Pradesh

candidates as per DST OM No. A.SR/S9/Z-05/2019 dated on 30 Jan 2019. However, there is no compulsion on PIs to select candidates for JRF in their projects from Category-II of DBT-BET.

8. As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organisations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provision of CAG(DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organisation is called upon to do so.

9. If the Research Project involves biological resources, the obligations under the Biological Diversity Act 2002 as applicable shall be complied with by the Project Investigator, the details of such obligations can be accessed at www.nbaindia.org

10. (I) The PIs/Implementing Agencies shall strictly adhere to the GoI instructions issued vide OM No.F.4.1.2021-PPD dated 30.6.2021 in the matter of issue of Global tender Enquiry with special reference to instructions contained under para 4 of the said OM for procurement of equipments, spares and consumables for research purposes and shall not issue Global Tenders Enquiries before seeking the approval of the competent authority.

(II) After incurring the expenditure on import of such items and at the time of submission of UCs to the department next year, the PIs will also furnish the copy of the approval sought from the competent authority for issue of the GTE for such items of import. The release of next installment of grant will be subject to the fulfillment of the above condition.

11. If any biological data as specified in the guidelines are being generated in the project, then PI should submit the data generated in the project to Indian Biological Data Centre – The National Repository being implemented at Regional Centre for Biotechnology, Faridabad in compliance with the Biotech-PRIDE Guidelines 2021.

12. This issues under the power delegated to this Department and with the concurrence of IFD vide their SAN No.102/IFD/SAN/3434/2021-2022 dated March 21, 2022.

13. This sanction order has been noted at serial no. 36, 37 in the Register of Grants.
(NR) (R)



(Dr. Vaishali Panjabi)

Scientist 'E'

Principal Investigator
DBT-BET/CSIR
National Repository
Regional Centre for Biotechnology
Faridabad, Haryana
CSIR/ICAR/DBT/Ministry of Biotechnology

To,
The Pay & Accounts Officer,
Department of Biotechnology,
New Delhi – 110 003.

Copy to:

1. The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi – 110002
2. The Director, CSIR-Institute of Himalayan Bioresource Technology (IHBT), Post Box No. 6, Palampur – 176061, Himachal Pradesh

3. The CEO, DBT-Centre of Innovative and Applied Bioprocessing (CIAB), Sector-81 (Knowledge City), PO Manauli, S.A.S. Nagar, Mohali – 140306, Punjab
4. The Registrar, Shoolini University, Anand Campus, The Mall, Solan – 173212, Himachal Pradesh
5. The Director, DBT-Institute of Bioresources and Sustainable Development (IBSD), Takyelpat Institutional Area, Imphal – 795001, Manipur
6. The Dean Research, University of Kashmir, Hazratbal, Srinagar – 190006, J&K
7. The Registrar, Indian Institute of Technology (IIT), Mandi – 175005, Himachal Pradesh
8. Dr. Dharam Singh, Principal Scientist, Department of Biotechnology, CSIR-Institute of Himalayan Bioresource Technology (IHBT), Post Box No. 6, Palampur – 176061, Himachal Pradesh
9. Dr. Sudesh Kumar, Scientist F, Department of Biotechnology, DBT-Centre of Innovative and Applied Bioprocessing (CIAB), Sector-81 (Knowledge City), PO Manauli, S.A.S. Nagar, Mohali – 140306, Punjab
10. Prof. Kamal Dev, Faculty of Applied Sciences and Biotechnology, Shoolini University of Life Sciences and Business Management (SULSBM), Oachghat-Kumarhatti Highway, Bajhol, Solan – 173229, Himachal Pradesh
11. Dr. Amit Kumar Rai, Scientist C, Microbial Resources Division, DBT-Institute of Bioresources and Sustainable Development (IBSD), Tadong, Gangtok – 737102, Sikkim
12. Dr. Ruqeya Nazir Shiekh, Sr. Assistant Professor, Centre of Research for Development, University of Kashmir, Hazratbal, Srinagar – 190006, J&K
13. Dr. Tulika P Srivastava, Associate Professor, School of Basic Sciences, Indian Institute of Technology (IIT), Mandi – 175005, Himachal Pradesh
14. Cash Section, DBT (2 copies).
15. Sanction Folder.
16. File Copy.

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(Dr. Vaishali Panjabi)
Scientist 'E'

Dr. Vaishali Panjabi, Scientist 'E',
Department of Biotechnology, CSIR-Institute of Himalayan
Bioresource Technology (IHBT), Post Box No. 6, Palampur – 176061,
Himachal Pradesh, India.

Details of the Equipment sanctioned for the implementation of the project entitled "Process optimization and up-scale production of lignocellulosic extremozymes from Himalayan microbes for biomass valorization/depolymerization":

S. No.	Name of Equipment	No.	Cost (₹)
DBT-Centre of Innovative and Applied Bioprocessing, Mohali			
1.	Microbial Fermenter	1	725000.00
2.	Pulveriser	1	100000.00
3.	Sonicator Probe	1	129000.00
4.	Data Analysis System	1	94000.00
Total			1048000.00
Shoolini Institute of Life Sciences & Business Management, Solan			
1.	Incubator shaker (Temperature controlled)	1	690000.00
2.	Ultra-deep freezer (-80OC)	1	575000.00
Total			1265000.00
DBT-IBSD, Imphal			
1.	Shaking Water Bath / Thermo Scientific Vacuum Concentrator	1	299000.00
Total			299000.00
University of Kashmir, Srinagar			
1.	Incubator Shaker	1	570000.00
2.	Gel Electrophoresis	1	130000.00
3.	Refrigerated Centrifuge	1	500000.00
Total			1200000.00
Indian Institute of Technology, Mandi			
1.	HPC cluster	1	499000.00
Total			499000.00

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(Dr. Vaishali Panjabi)
Scientist 'E'

Annexure-II

Details of the manpower sanctioned for the implementation of the project entitled "Process optimization and up-scale production of lignocellulosic extremozymes from Himalayan microbes for biomass valorization/depolymerization":

Head	No. of Position	Year I	Year II	Year III	Total (₹)
1. DBT-IHBT, Palampur					
Project Associate-I (₹ 31,000/- fixed per month + 8% HRA)	3	1205280	1205280	1205280	3615840
Senior Project Associate (₹ 42,000/- fixed per month + 8% HRA)	3	1632960	1632960	1632960	4898880
Total (₹)		2838240	2838240	2838240	8514720
2. DBT-CIAB, Mohali					
Junior Research Fellow (₹ 31,000/- fixed per month + 8% HRA for year I and II, ₹ 35,000/- fixed per month + 8% HRA for year III)	1	401760	401760	453600	1257120
Research Associate-III (₹ 54,000/- fixed per month + 8% HRA)	1	699840	699840	699840	2099520
Total (₹)		1101600	1101600	1153440	3356640
3. Shoolini University of Life Sciences & Business Management, Solan					
Junior Research Fellow (₹ 31,000/- fixed per month + 8% HRA for year I and II, ₹ 35,000/- fixed per month + 8% HRA for year III)	2	803520	803520	907200	2514240
Total (₹)		803520	803520	907200	2514240
4. DBT-Institute of Bioresources and Sustainable Development, Imphal					
Project Associate-I (₹ 31,000/- fixed per month + 8% HRA)	2	803520	803520	803520	2410560
Total (₹)		803520	803520	803520	2410560
5. University of Kashmir, Srinagar					
Project Associate-I (₹ 31,000/- fixed per month + 16% HRA)	1	431520	431520	431520	1294560
Total (₹)		431520	431520	431520	1294560
6. Indian Institute of Technology, Mandi					
Junior Research Fellow (₹ 31,000/- fixed per month + 8% HRA for year I and II, ₹ 35,000/- fixed per month + 8% HRA for year III)	1	401760	401760	453600	1257120
Total (₹)		401760	401760	453600	1257120

Emolument details of research personal(s) mentioned in table(s) of Annexure-II shall be applicable only if candidate(s) met educational qualification and eligibility criteria as per DST OM No. SR/S9/Z-05/2019 dated 10.07.2020.

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(Dr. Vaishali Panjabi)
Scientist 'E'

Director, Institute of Microbial Technology
 Indian Institute of Technology, Mandi
 Udhampur, Jammu & Kashmir, India
 Contact: 0191-2631000 / 2631001 / 2631002 / 2631003 / 2631004 / 2631005 / 2631006 / 2631007 / 2631008 / 2631009 / 2631010 / 2631011 / 2631012 / 2631013 / 2631014 / 2631015 / 2631016 / 2631017 / 2631018 / 2631019 / 2631020 / 2631021 / 2631022 / 2631023 / 2631024 / 2631025 / 2631026 / 2631027 / 2631028 / 2631029 / 2631030 / 2631031 / 2631032 / 2631033 / 2631034 / 2631035 / 2631036 / 2631037 / 2631038 / 2631039 / 2631040 / 2631041 / 2631042 / 2631043 / 2631044 / 2631045 / 2631046 / 2631047 / 2631048 / 2631049 / 2631050 / 2631051 / 2631052 / 2631053 / 2631054 / 2631055 / 2631056 / 2631057 / 2631058 / 2631059 / 2631060 / 2631061 / 2631062 / 2631063 / 2631064 / 2631065 / 2631066 / 2631067 / 2631068 / 2631069 / 2631070 / 2631071 / 2631072 / 2631073 / 2631074 / 2631075 / 2631076 / 2631077 / 2631078 / 2631079 / 2631080 / 2631081 / 2631082 / 2631083 / 2631084 / 2631085 / 2631086 / 2631087 / 2631088 / 2631089 / 2631090 / 2631091 / 2631092 / 2631093 / 2631094 / 2631095 / 2631096 / 2631097 / 2631098 / 2631099 / 2631100