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Appl. No.: Agri/2017/34

No. BT/PR24808/NER/95/858/2017 GOVERNMENT OF INDIA MINISTRY OF SCIENCE & TECHNOLOGY DEPARTMENT OF BIOTECHNOLOGY (NER-BPMC)

> Block 2, 6-8th Floors CGO Complex, Lodhi Road, New Delhi- 110 003 Dated: 0 /09/2018

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: "Diversity assessment, in vitro propagation and DNA Barcoding of Ferns & Fern-allies of Assam" for a period of 3 Year 0 Month at a total cost of Rs. 9729992 (Rupees Ninety Seven Lakhs Twenty Nine Thousand Nine Hundred and Ninety Two Only) on the terms and conditions detailed here under:-

2 The Project:

2.1 Title: "Diversity assessment, in vitro propagation and DNA Barcoding of Ferns & Fern-allies of Assam"

2.2 Details of the Investigators:

Project Co-ordinator

Dr. Pankaj ChetiaAssistant Professor
Department of Life Sciences
Dibrugarh University, Dibrugarh, Assam, 786004

Principal Investigators:

Prof. Pankaj Chetia Assistant Professor Department of Life Sciences Dibrugarh University, Dibrugarh, Assam, 786004

Dr. Anupam Das Talukdar Assistant Professor Department of Life Science and Bionformatics Assam (Central) University, Silchar Dargakona, Assam. Pin: 788011

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CO-PI:

Prof. Manabendra Dutta Choudhury Coordinator cum Professor DBT Assam University Biotech Hub Department of Life Science and Bioinformatics, Assam University, Silchar - 788011, Assam

Prof. Lakhi Ram Saikia Professor Department of Life Sciences, Dibrugarh University, Dibrugarh - 786004, Assam

2.3 Objectives:

Overall Objectives:

 The Overall objective is to document the Fern and Fern-allies of Assam and to carry out DNA Barcoding Based Studies of all the samples collected and in vitro propagation of RET species

Institute wise Objectives:

Assam (Central) University, Silchar

- Documentation and Identification of Ferns and Fern-allies of Southern Assam and Hill Districts of Assam
- 2. In vitro propagation of RET and endemic Fern & Fern-allies

Dibrugarh University

- Documentation in the form of Digital Database and Herbaria of Fern and Fern-allies of Upper and Lower Assam region
- Identification and phylogeny of selected species of fern and fern-allies based upon morphology and DNA barcoding
- 3. Transcriptome analyses of gametophytic tissues from selected fern species

2.4 Time Schedule:

The duration of the project is 3 Year 0 Month from the date of this sanction order.

2.5 Project Cost:

The total cost of the project is Rs. 9729992/-(Rupees Ninety Seven Lakhs Twenty Nine Thousand Nine Hundred and Ninety Two Only) as per details given below:



Inst itute	Year I	Year II	Year III	Total Cost(Rs.)	
1. Assam (Central) University, Silchar	2450000	830000	869996	4149 996	
2. Dibrugarh University	3380000	1230000	969996	5579996	
Total (Rs.)	5830000	2060000	1839992	9729992	

Institute wise details are:

Budget Head	Year I	Year II	Year III	Total(Rs.)
1. Dibrugarh U	niversity		- 1	= *
Equipment	2350000.00	Т	T	2350000.00
Manpower	330000.00	330000.00	369996.00	1029996.00
Contingency	50000.00	50000.00 50000.00		150000.00
Travel	50000.00	50000.00	50000.00	150000.00
Consumables	500000.00	700000.00	400000.00	1600000.00
Overhead	100000.00	100000.00	100000.00	300000.00
Total (Rs.)	3380000.00	1230000.00	969996.00	5579996.00
2. Assam (Cent	ral) Universit	y, Silchar		
Equipment	1620000.00	1.		1620000.00
Manpower	330000.00	330000.00	369996.00	1029996.00
Contingency 50000.00		50000.00	50000.00	150000.00
Travel	Travel 50000.00		50000.00	150000.00
Consumables	onsumables 300000.00		300000.00	900000.00
Overhead	100000.00	100000.00	100000.00	300000.00
Total (Rs.)	Total (Rs.) 2450000.00		869996.00	4149996.00

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

2.7 Manpower:

The details of the manpower sanctioned for the implementation of the project at **Annexure-II**

3. Head of Account:

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The Non-Recurring expenditure involved is debitable to:

Demand No. 85	Department of Biotechnology		
3425	Other Scientific Research 2018-2019		
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 for Research and Development		
3425.60.200.29.17.35	Grants for creation of capital assets		

The Recurring expenditure involved is debitable to:

Demand No. 85	Department of Biotechnology	
3425	Other Scientific Research 2018-2019	
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 for Research and Development	
3425.60.200.29.17.31	Grants-in-Aid General	

4. Terms & Conditions:

Additional Terms and Conditions specific for Twinning R and D program for NER:

- a . Both NER and Rest of India RoI Institutions scientists should work together for the objectives stated in the sanction of the project and any deviation from this would attract closure of the project at any point of time.
- ${\bf b}$. In the project review meetings, both the PIs from NER $\,$ and $\,$ RoI Institutions should participate and $\,$ make presentation.
- c. The outcomes of the project such as research papers, patents, copy rights etc. should be made jointly.
- $\mbox{\bf d}$. The NER Scientists are to be trained at the collaborating institute appropriately to empower the NER Scientists.
- e. The project personal such as Research Associate, JRF or SRF, Research Assistant are also to be trained at least once in the collaborating national institute.
- f_* The collaborating institute scientist should visit NER institutions more frequently to guide NER scientists in design and conduct of experiments.

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- 4.1 The other terms and conditions governing this sanction are attached at Annexure- III.
- 4.2A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institution on Non-Judicial stamp paper Rs. 100/- in the enclosed format and the se ond release/installment will be made only after signing of MoA by the grantee institutions and its acceptance by DBT. In case of NGO or Private Institution, MOA signed is mandatory first release. A format of the MoA is enclosed in Annexure-IV
- 4.3The 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 so earned will be treated as created to the institute/Agency and shall be adjusted towards further installment of the grant and or at the time of Final Settlement of Accounts.
- 5.No International Travel will be undertaken from the sanctioned project grant unless specified of herwise.
- 6.The Registrar, Assam (Central) University, Silchar, Assam and The Registrar, Dibrugarh University, Dibrugarh, Assam 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 candidates as per DST OM No. A.SR/S9/Z-09/2012 dated on 21 Oct 2014. However, there is no compulsion on PI's 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 resource, 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.This issues under the power delegated to this Department and with the concurrence of IFD vide their SAN No.102/IFD/SAN/1876/2018-2019 dated August, 30 2018.

11. This sanction order has been noted at serial no 225 - 226 in the Register of Grants.

(Dr. Vaishali Panjabi) Scientist 'E'

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

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Copy to:

- 1 The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi- 110 002.
- 2 Dr. Pankaj Chetia (Project Co-ordinator), Department of Life Sciences, Dibrugarh University, Dibrugarh 786004, Assam
- 3 The Registrar, Assam (Central) University, DARGAKONAH, Silchar 788011, Assam
- 4 The Registrar, Dibrugarh University, Dibrugarh 786004, Assam
- 5 Dr. Anupam Das Talukdar, Assistant Professor, Department of Life Science and Bionformatics, Assam (Central) University, Dargakona, Silchar - 788011, Assam
- 6 Prof. Lakhi Ram Saikia, Professor, Department of Life Sciences, Dibrugarh University, Dibrugarh - 786004, Assam
- 7 Prof. Manabendra Dutta Choudhury, Coordinator cum Professor, DBT Assam University Biotech Hub, Department of Life Science and Bioinformatics, Assam University, Silchar -788011, Assam
- 8 Prof. Pankaj Chetia, Assistant Professor, Department of Life Sciences Dibrugarh University, Dibrugarh - 786004, Assam
- 9 Cash Section, DBT (2 copies).
- 10 Sanction Folder.
- 11 File Copy.

(Dr. Vaishali Panjabi) Scientist 'E'

Annexure -I

Details of the Equipment sanctioned for the implemention of the project titled "Diversity assessment, in vitro propagation and DNA Barcoding of Ferns & Fern-allies of Assam":

Dibru	garh University		
SNIO.	Name of Equipment	No.	Cost(Rs.)
1.	Gradient Thermal Cycler	1	250000.00
2.	Cooling Microcentrifuge	1	400000.00
3.	UV-Vis Spectrophotometer	1	550000.00
4.	Nucleic Acid Extractor	1	900000.00
5.	Dry Bath with Shaker	1	190000.00
6.	Micropipette set	1	60000.00
N C		Total	2350000.00
Assar	m (Central) University, Silchar		The American
SNI 0.	Name of Equipment	No.	Cost(Rs.)
1.	Plant Tissue Culture Chamber	1	1149000.00
2.	Inverted Microscope with camera features	1	471000.00
-		Total	1620000.00

Vandali Panjabi)
Scientist 'E'

Defails of the manpower sanctioned for the implemention of the project titled "Diversity assessment, in vitro propagation and DNA Barcoding of Ferns & Fern-allies of Assam":

Head	No. of Position	Year I	Year II	Year III	Total (Rs.)
1. Assam (Centra	l) Univer	sity, Silchar			
Junior Research Fellow Manpower + 10% hRA	1	330000.00	330000.00		660000.00
Serior Research Fellow Manpower + 10% hRA	1	2		369996.00	369996.00
Total(Rs.)		330000.00	330000.00	369996.00	1029996.00
2. Dibrugarh Uni	versity	Y	*		2
Junior Research Fellow JRF for Field study and DNA Barcoding studies	1	330000.00	33000.00		660000.00
Senior Research Fellow SRF for Field study and DNA Bancoding studies	1		The state of the s	369996.00	369996.00
Total(Rs.)		330000.00	330000.00	369996.00	1029996.00

Ennoluments detail 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-09/2012 dated 21.10.2014.

(Dr. Vaishali Panjabi) Scientist 'E'