



From: Principal & Secretary

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Dhaniakhali, Hooghly, 712302

Sarat Centenary College

Dhaniakhali, Hooghly

Founded: 1976

Recognised Under UGC 2F&12B
WB Govt. Aided
Affiliated to The University of Burdwan

3 RD CYCLE OF NAAC ACCREDITATION PROCESS - 2024

CRITERION: 3 - Research, Innovations and Extension

Key Indicator:

3.5 Collaboration

Metric: 3.5.1- Summary of the Functional MOUs or other Research
Collaboration Etc.



A. G. Baruah
Principal & Secretary,
Sarat Centenary College,
P.O. - Dhaniakhali, Dist- Hooghly

ISS-155

Administrative

(Application No: AGRI/2015/42)

File No. BT/PR16610/NER/95/221/2015
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
(NER-BPMC)

Block-2, 7th Floor,
CGO Complex, Lodhi Road
New Delhi-110003

Dated: 13 / 10 / 2016

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 under 'DBT's Twinning programme for the NE' titled "An in-depth study of host-non-mulberry silkworm interaction with special reference to extra floral nectaries (EFN) and volatile organic chemicals (VOC) of host plants and the silkworm's adaptations to the host plant's defense response" by Dr. Dipsikha Bora, Dibrugarh University, Dibrugarh and Dr. Krishna Ray, West Bengal State University, Kolkata, West Bengal at a total cost of ₹ 62.90 lakhs (Rupees Sixty Two lakhs and Ninety thousand only) for a period of three years on the terms and conditions detailed as under:

2.0 The Project:

2.1 Project Title: An in-depth study of host-non-mulberry silkworm interaction with special reference to extra floral nectaries (EFN) and volatile organic chemicals (VOC) of host plants and the silkworm's adaptations to the host plant's defense response.

2.2 Project Investigators

2.2.1 Principal Investigator: Dr. Dipsikha Bora
(Parent Institute) Professor
Department of Life Sciences
Dibrugarh University
Dibrugarh- 786004, Assam

2.2.2 Co-Investigator.: Dr. Devid Kardong
(Parent Institute) Assistant Professor
Department of Life Sciences
Dibrugarh University,
Dibrugarh- 786004, Assam

2.2.3 Principal Investigator: Dr. Krishna Ray
(Collaboration Institute) Assistant Professor
Dept. of Botany
West Bengal State University,
Berunanpukuria, Malikapur, Barasat,
Kolkata- 700126, West Bengal.

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**2.2.4 Co-Investigator.:
(Collaborating Institute)**

Dr. Sandip Kumar Basak
Associate Professor
Department of Botany
Kandi Raj College, Kandi,
Murshidabad, West Bengal-742137

2.3 Objectives:

1. Localization and characterization of EFN of non-mulberry host plants with reference to their influence on arthropod population including *Antheraea spp.* and *Samia Cynthia ricini*.
2. Characterization of plant volatiles of selected non-mulberry host plants under feeding induced/non-induced condition.
3. Behavioural study of the ecoraces of non-mulberry silkworms with respect to olfactory response to VOCs.
4. Identification of ecologically sustainable combination of host plant with least defense response aligned with best adapted ecorace against host plants' defense response.

2.4 Time Schedule:

The duration of the project is **three years** from the date of issue of sanction order.

2.5 Equipment Details:

2.5.1 Dibrugarh University, Dibrugarh

Sl. No.	Description of equipment	Grant Recommended (₹ in lakhs)
1.	Protein electrophoresis assembly	5.00
2.	Green house with accessories (240sq ft.)	7.50
3.	Stereozoom microscope with CCD camera	1.95
Total		14.45

2.5.2 West Bengal State University, Kolkata, West Bengal

Sl. No.	Description of equipment	Grant Recommended (₹ in lakhs)
1.	Trinocular Research Microscope with CCD camera and software	2.00
Total		2.00

2.6 Manpower:

Fellowship Conditions:

A year wise detail of manpower as proposed has been furnished below. HRA will be as per the Govt. Norms, an indication as stated below for the JRF and SRF's emoluments will be



provided as a part of sanction order. JRF shall be ₹ 25,000/- + HRA for the 1st two years and ₹ 28,000/- + HRA for the 3rd year for SRF and applicable, (JRF - Post graduate Degree in Basic Science with NET qualification or graduate degree in Professional course with NET qualification or post graduate degree in professional course)

JRF without NET qualification shall be ₹ 12,000/- + HRA for the 1st two years and ₹ 14,000/- + HRA for the 3rd year for SRF

- For JRF/SRF/RA salary is as per the revised DST OM SR/S9/Z-09/2012, dated October 21, 2014.
- For Project Assistant salary is as per the revised DST OM C.30011/1/2007-IFD, dated 21st July 2008.

2.6.1 Dibrugarh University, Dibrugarh

(₹ in lakhs)

S. No.	Position (No.)	Emolument	1 st Year	2 nd Year	3 rd Year	Total
1.	JRF/SRF (1)	JRF @ ₹ 25,000/- + 10 % HRA for the 1 st & 2 nd yr SRF @ ₹ 28,000/- + 10 % HRA for 3 rd yr	3.30	3.30	3.69	10.29
Total			3.30	3.30	3.69	10.29

2.6.2 West Bengal State University, Kolkata, West Bengal

(₹ in lakhs)

S. No.	Position (No.)	Emolument	1 st Year	2 nd Year	3 rd Year	Total
1.	JRF/SRF (1)	JRF @ ₹ 25,000/- + 30 % HRA for the 1 st & 2 nd yr SRF @ ₹ 28,000/- + 30 % HRA for 3 rd yr	3.90	3.90	4.36	12.16
Total			3.90	3.90	4.36	12.16

2.7 Budget Estimate:

The total cost of the project is ₹ 62.90 lakhs (Rupees Sixty Two lakhs and Ninety thousand only) as per budget summary given below:

2.7.1 Dibrugarh University, Dibrugarh

(₹ in lakhs)

Heads	1 st Year	2 nd Year	3 rd Year	Total
I. Non-Recurring (Equipments and accessories)	14.45	0.00	0.00	14.45
Sub Total- I	14.45	0.00	0.00	14.45
II. Recurring				
1. Manpower	3.30	3.30	3.69	10.29
2. Consumables	2.00	3.00	2.00	7.00
3. Travel	0.50	0.50	0.50	1.50

Handwritten signature

4. Contingency	0.50	0.50	0.50	1.50
5. Overhead charges	1.00	1.00	1.00	3.00
Sub Total- II (1-5)	7.30	8.30	7.69	23.29
GRAND TOTAL (I+II)	21.75	8.30	7.69	37.74

2.7.2 West Bengal State University, Kolkata, West Bengal

(₹ in lakhs)

Heads	1 st Year	2 nd Year	3 rd Year	Total
I. Non-Recurring (Equipment's and accessories)	2.00	0.00	0.00	2.00
Sub Total- I	2.00	0.00	0.00	2.00
II. Recurring				
1. Manpower	3.90	3.90	4.36	12.16
2. Consumables	2.00	2.00	2.00	6.00
3. Travel	0.50	0.50	0.50	1.50
4. Contingency	0.50	0.50	0.50	1.50
5. Overhead charges	1.00	0.50	0.50	2.00
Sub Total- II (1-5)	7.90	7.40	7.86	23.16
GRAND TOTAL (I+II)	9.90	7.40	7.86	25.16

(i) Grand total for 3 years (37.74+ 25.16) = ₹ 62.90 lakhs

(ii) Total for 1st year release (21.75+9.90) = ₹ 31.65 lakhs

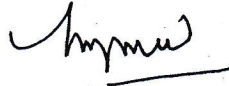
2.8 Other Terms & Conditions:

- 2.8.1 The other terms and conditions governing this sanction are attached at **Annexure-I**.
- 2.8.2 A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institute on a ₹ 100/- stamp paper in the format given at **Annexure II** and the subsequent releases will be made only after signing of MoA by the grantee institute and its acceptance by DBT. All pages need to be signed by the PI and the forwarding authority and the MoA returned to DBT within 30 days of issue of this letter.
- 2.8.3 The Non-recurring items must be procured and installed within 6 month period from the date of sanction.
- 2.8.4 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.
- 2.8.5 No international travel will be undertaken from the sanctioned project grant unless specified otherwise.
- 2.8.6 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 Utilization 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 Account.

2.9 Additional Terms & Conditions, specific for Twinning R&D program for NER:

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- 2.9.1 Both NER & 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.
- 2.9.2 In the project review meetings, both the PI's from NER & RoI Institutions should participate & make presentation.
- 2.9.3 The outcomes of the project such as research papers, patents, copy rights etc. should be made jointly.
- 2.9.4 The NER Scientists are to be trained at the collaborating institute appropriately to empower the NER Scientists.
- 2.9.5 The project personal such as Research Associate, JRF/SRF, Research Assistant are also to be trained at least once in the collaborating national institute.
- 2.9.6 The collaborating institute scientist should visit NER institutions more frequently to guide NER scientists in design and conduct of experiments.
- 2.10 This issues under the powers delegated to this Department and with the concurrence of IFD, DBT vide their Dy No. 102/I.F.D/SAN/2122/2016-2017 Dated 22/08/2016.
- 2.10.1 This sanction order has been noted at Serial No..... in the Register of Grants.
- 2.10.2 The accounts of grantee institution shall be open to inspection by sanctioning auditory / audit.
- 3.0 M/S Biotech Consortium India Ltd (BCIL), Anuvrat Bhawan, 210, Deen Dayal Upadhyay Marg, New Delhi- 110002, is administrating the North Eastern Region Biotechnology Programme Management Cell (NER-BPMC) of the DBT.


(Dr. T. Madhan Mohan)
Advisor, DBT

To,
The Pay & Accounts Officer,
Department of Biotechnology,
New Delhi - 110003

Copy to:

1. The Principal Director of Audit (Scientific Department), AGCR Building, New Delhi - 110 002.
2. Cash Section, DBT (For information only).
3. Sanction Folder.
4. IFD, DBT.
5. The Registrar, Dibrugarh University, Dibrugarh- 786004, Assam.
6. The Vice-Chancellor, Dibrugarh University, Dibrugarh- 786004, Assam.
7. The Registrar, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata- 700126, West Bengal.

8. The Vice-Chancellor, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata- 700126, West Bengal.
9. Dr. Dipsikha Bora, Professor, Department of Life Sciences, Dibrugarh University, Dibrugarh- 786004, Assam.
10. Dr. Krishna Ray, Assistant Professor, Dept. of Botany, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata- 700126, West Bengal.
11. Concern file.
12. The Managing Director, Biotech Consortium India Limited, (NER-BPMC), 5th Floor, Anuvrat Bhawan, 210, Deen Dayal Upadhyay Marg, New Delhi- 110002.



(Dr. T. Madhan Mohan)
Advisor, DBT

156
Application No: AGRI/2015/42

File No. BT/PR16610/NER/95/221/2015
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
(NER-BPMC)

Block-2, 7th Floor,
CGO Complex, Lodhi Road
New Delhi - 110003
Dated: 13/10/2016

ORDER

In continuation of this department's sanction order of even number dated 13/10/2016, sanction of the President of India is hereby accorded under Rule 18 of the Delegation of Financial Powers Rules, 1978 for the release of first year grant of ₹ 9.90 lakhs (Rupees Nine lakhs and Ninety Thousand only) to The Registrar, West Bengal State University, Kolkata, West Bengal for the implementation of the project under 'DBT's Twinning Program for the NE' titled "An in-depth study of host-non-mulberry silkworm interaction with special reference to extra floral nectaries (EFN) and volatile organic chemicals (VOC) of host plants and the silkworm's adaptations to the host plant's defense response" by Dr. Dipsikha Bora, Dibrugarh University, Dibrugarh and Dr. Krishna Ray, West Bengal State University, Kolkata, West Bengal, as per the details given below:

(₹ in lakhs)	
Heads	1 st Year
I. Non-Recurring (Equipment's and accessories)	2.00
Sub Total- I	2.00
II. Recurring	
1. Manpower	3.90
2. Consumables	2.00
3. Travel	0.50
4. Contingency	0.50
5. Overhead charges	1.00
Sub Total- II (1-5)	7.90
GRAND TOTAL (I+II)	9.90

(Rupees Nine lakhs and Ninety Thousand only)

2. The other terms and conditions governing the financial sanction will remain unaltered.
3. The Non-recurring items must be procured and installed within 6 month period from the date of sanction.
4. The account of the guarantee institution shall be open to inspection by the sanctioning authority/audit.



5. M/s Biotech Consortium India Ltd., Anuvrat Bhawan, 210, Deen Dayal Upadhyay Marg, New Delhi-110 002, who is administrating the North Eastern Region Biotechnology Program Management Cell (NER-BPMC) of the department, is hereby authorized to disburse the amount of ₹ 9.90 lakhs (Rupees Nine lakhs and Ninety Thousand only), as referred in para 1 above, in favor of "The Registrar, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata- 700126, West Bengal" by an account payee cheque/demand draft under scheme North Eastern Region Biotechnology Program.
6. This issues under the powers delegated to this Department and with the concurrence of IFD, DBT vide their Dy No. 102/I.F.D/SAN/2122/2016-2017 Dated 22/08/2016.
7. This sanction order has been noted at Serial No. 156. in the Register of Grants.
8. Being the first release of the project, Utilization Certificate is not applicable.
9. 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.
10. No international travel will be undertaken from the sanctioned project grant unless specified otherwise.
11. **Additional Terms & Conditions for Twining R&D program for NER:**
 - a. Both NER & 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.
 - b. In the project review meetings, both the PI's from NER & RoI Institutions should participate & make presentation.
 - c. The outcomes of the project such as research papers, patents, copy rights etc. should be made jointly.
 - 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/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.

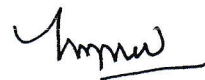


(Dr. T. Madhan Mohan)
Advisor, DBT

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

Copy to:

1. The Principal Director of Audit (Scientific Department), AGCR Building, New Delhi - 110 002.
2. Cash Section, DBT (For information only).
3. Sanction Folder.
4. IFD, DBT.
5. The Registrar, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata- 700126, West Bengal.
6. The Vice-Chancellor, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata- 700126, West Bengal.
7. Dr. Krishna Ray, Assistant Professor, Dept. of Botany, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata- 700126, West Bengal.
8. Concern file.
9. The Managing Director, Biotech Consortium India Limited, (NER-BPMC), 5th Floor, Anuvart Bhawan, 210, Deen Dayal Upadhyay Marg, New Delhi- 110002



(Dr. T. Madhan Mohan)
Advisor, DBT

Dated: 06 March, 2019

ORDER

Subject: Research project entitled "**Study of reproductive biology of mangrove species in Sundarbans in correlation to its potential for mangrove restoration**" under the guidance of Dr. SANDIP KUMAR BASAK, Botany, Sarat Centenary College, Dhaniakhali, Hooghly, West bengal-712302.

1. This is in continuation of SERB's sanction order No. "EMR/2016/005262" dated "31 July, 2017 " of **Science and Engineering Research Board (SERB)**.

The budget for both the institutes is given below:

S. No	Head	Original Total Cost (in INR)	Allocation for Kandi Raj College, Kandi (in INR)	Allocation for Sarat Centenary College, Dhaniakhali (in INR)
A	Non-recurring (Capital Items)			
1	Equipment -> <u>UPRIGHT EPI-FLUORESCENCE MICROSCOPE WITH ACCESSORIES</u> -> Stereozoom trinocular microscope	899300	899278	22
A'	<i>Total - Capital</i>	899300	899278	22
B	Recurring Items			
1	Manpower -> JRF - 1[Rs. 330000/- PY for I year, Rs. 330000/- PY for II year, Rs. 369600/- PY for III year } 25000+10% HRA for year 1 and 2; 28000+10% HRA for year 3]	1029600	308000	721600
2	Consumables	900000	300000	600000
3	Travel	450000	150000	300000
4	Contingencies	300000	100012	199988
5	Other Cost	0	0	0
	General - I (Manpower, Consumables, Travel, Contingencies, Other Cost)	2679600	858012	1821588
	General - II Overhead Charges	357890	132400	225490
B'	<i>Total - Recurring</i>	3037490	990412	2047078
C	Total cost of the project (A' + B')	3936790	1889690	2047100

2. The revised total cost of the project at **Kandi Raj College, Kandi** would be Rs. 1889690/- and total cost for **Sarat Centenary College, Dhaniakhali** would be Rs. 2047100/- The project duration is till 27 September, 2020.

3. Sanction of the competent authority is hereby accorded to the payment of a sum of **Rs. 900000/-** (Rupees Nine Lakh only) under 'Grants-in-aid General' to **Principal, Sarat Centenary College, Dhaniakhali** being the 2nd grant for the financial year 2018-2019 for implementation of the above said project.

4. Sanction of the competent authority is also accorded to the transfer of unspent balance of **Rs. 43453/-** (Rupees Forty Three Thousand Four Hundred and Fifty Three only) (Recurring Rs. 43431 and Non-Recurring Rs. 22) to Sarat Centenary College, Dhaniakhali from FY 2017-2018 to FY 2018-2019 for the same purpose for which it was sanctioned

5. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in).

6. It is certified that provision of GFR 212 relating to Utilization Certificates (Ucs) for the funds released under the grant have been satisfied and the UC/s is/are enclosed herewith.

7. The expenditure involved is debit to **Fund for Science & Engineering Research (FSER)**
This release is being made under Core Research Grant. (PAC Plant Sciences)

8. The Sanction has been issued to Sarat Centenary College, Dhaniakhali with the approval of the competent authority under delegated powers on **05 March, 2019** and vide Diary No. **SERB/F/11843/2018-2019** dated **06 March, 2019**

9. The release amount of **Rs. 900000/-** (Rupees Nine Lakh only) (Recurring Rs. 900000 and Non-Recurring Rs. 0) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

Account Name	SARAT CENTENARY COLLEGE
Account Number	50100188691050
Bank Name & Branch	HDFC bank Branch Dhaniakhali, Cinematala, Hooghly 712302
IFSC/RTGS Code	HDFC0004390
Email id of A/C Holder	principal_scollegednk@rediffmail.com
Email id of PI	sandipbasak9592@gmail.com

10. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.

11. As per rule 211 of GFR the accounts of Grantee Institution shall be open to inspection by the sanctioning authority / audit whenever the institute is called upon to do so.

12. The institute will furnish to the SERB, Utilization certificate (separate for Recurring & Non-Recurring) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.

13. After completion of the project unspent balance if any should be returned as Demand Draft drawn in favour of "Fund for Science and Engineering Research" payable at New Delhi.

14. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board, a statutory body of the Department of Science & Technology (DST), Government of India should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.

15. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by the Science & Engineering Research Board, a statutory body of Department of Science & Technology (DST), Government of India.

16. The File no. EMR/2016/005262 may also be mentioned in all research communications arising from the above project with due acknowledgement of SERB.

(Dr. Shilpi Paul)
Scientist E

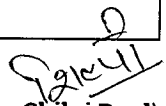
ms_ps@serbonline.in

To,
Under Secretary
SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R. Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB, New Delhi.
3.	File Copy

4.	Dr. SANDIP KUMAR BASAK Botany Sarat Centenary College , Dhaniakhali, Hooghly, West bengal-712302 Email: sandipbasak9592@gmail.com Mobile: 919434353556
5.	Principal, Sarat Centenary College, Dhaniakhali
6.	Director, Kandi Raj College, Kandi


(Dr. Shilpi Paul)
Scientist E
ms_ps@serbonline.in

No. BT/PR30531/BCE/8/1496/2018
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi- 110 003
Dated: 29/02/2020.

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 "**Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients**" for a period of 5 Year 0 Month at a total cost of Rs. **24189420** (Rupees Two Crores Fourty One Lakhs Eighty Nine Thousand Four Hundred and Twenty Only) on the terms and conditions detailed here under:-

2 The Project :

2.1 Title : Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients

2.2 Details of the Investigators:

Dr. Krishna Ray

Assistant Professor
Department of Botany, West Bengal State University
Berunanpukuria, Malikapur, Barasat, Kolkata, West Bengal, 700126

CO-PI:

Dr. Sandip Kumar Basak

Principal, Botany,
Sarat Centenary College
Dhaniakhali, Hooghly, Chandannagar, West Bengal 712302

Dr. Singaram Kulandaivel

Conservator of Forests & Joint Director
Forest Department, Govt of West Bengal
West Bengal Forest Department
3rd floor, North Block, Bikash Bhawan, Salt Lake, Kolkata, West Bengal, 700091

2.3 Objectives:

1. To restore degraded mangrove plots on the mud flats and along the eroded embankments measuring in total ~100 acres along the estuarine areas of Sundarbans with the help of already established restoration technology
2. To identify the degradation stressors associated with loss of mangrove ecosystem homeostasis across the degradation gradient and an attempt to mitigate them

2.4 Time Schedule:

The duration of the project is 5 Year 0 Month from the date of this sanction order.

2.5 Project Cost:

The total cost of the project is Rs. **24189420/-** (Rupees Two Crores Forty One Lakhs Eighty Nine Thousand Four Hundred and Twenty Only) as per details given below:

Budget Head	Year I	Year II	Year III	Year IV	Year V	Total(Rs.)
Equipment	1010300.00					1010300.00
Manpower	3794400.00	3794400.00	3913440.00	3913440.00	3913440.00	19329120.00
Overhead	70000.00	70000.00	70000.00	70000.00	70000.00	350000.00
Travel	300000.00	300000.00	300000.00	300000.00	300000.00	1500000.00
Consumables	250000.00	250000.00	250000.00	250000.00	250000.00	1250000.00
Contingency	150000.00	150000.00	150000.00	150000.00	150000.00	750000.00
Total (Rs.)	5574700.00	4564400.00	4683440.00	4683440.00	4683440.00	24189420.00

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:

The **Non-Recurring** expenditure involved is debitable to:

Demand No. 87	Department of Biotechnology
3425	Other Scientific Research 2019-2020
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. 87	Department of Biotechnology
3425	Other Scientific Research 2019-2020
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:

4.1 The other terms and conditions governing this sanction are attached at Annexure- III.

4.2 A 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 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

4.3 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 Utilization 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 otherwise.

6. The Registrar; West Bengal State University, Kolkata, West Bengal 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-08/2018 dated 30 Jan 2019. However, there is no compulsion on PI's to select candidates for JRF in their projects from Category-II of DBT-BET.

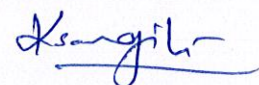
8. As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organizations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provision of CAG (DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organizations 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. If this project works requires any Statutory Clearance (such as Ethical Committee Clearance, Informed Consent, Animal Ethics Committee Clearance, Institutional Bio-safety Committee Clearance, National Biodiversity Authority approval etc.), Project investigator(s) and Host Institution(s) shall compulsorily comply the same before undertaking such activities.

11. This issues, under the power delegated to this Department and with the concurrence of IFD vide their SAN No 102/I.F.D./SAN 3972 / 2019/2020 dated 29.02.2020.

12. This sanction order has been noted at serial no. NIL in the Register of Grants.



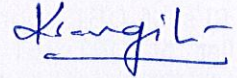
(Dr. Sangita Kasture)
Scientist 'F'

डॉ. संगीता कस्तूरे / Dr. Sangita Kasture
वैज्ञानिक 'एफ' / Scientist 'F'
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology
विज्ञान और प्रौद्योगिकी मंत्रालय / Ministry of Science & Tech.
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

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- 110 002.
- 2 The Registrar, West Bengal State University, Barasat, Berunanpukuria, Malikapur, North 24 Praganas, Kolkata - 700126, West Bengal
- 3 Dr. Krishna Ray, Assistant Professor, Department of Botany, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata - 700126, West Bengal
- 4 Dr. Sandip Kumar Basak, Principal, Botany, Sarat Centenary College, Dhaniakhali, Hooghly, Chandannagar West Bengal 712302
- 5 Dr. Singaram Kulandaivel, Conservator of Forests & Joint Director Forest Department, Govt of West Bengal, West Bengal Forest Department, 3rd floor, North Block, Bikash Bhawan, Salt Lake, Kolkata, West Bengal, 700091
- 6 Cash Section, DBT (2 copies).
- 7 Sanction Folder.
- 8 File Copy.



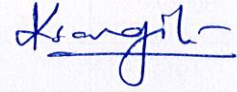
(Dr. Sangita Kasture)
Scientist 'F'

डॉ. संगीता कस्तूरे / Dr. Sangita Kasture
वैज्ञानिक 'एफ' / Scientist 'F'
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology
विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

Annexure -I

Details of the Equipment sanctioned for the implementation of the project entitled **"Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients"**:

West Bengal State University			
SNo.	Name of Equipment	No.	Cost(Rs.)
1.	Maintenance of the earlier constructed central nursery on site and other branch nurseries required to be constructed	1	180000.00
2.	B.O.D. incubator shaker	2	197800.00
3.	Freezer cum Cooler	1	29400.00
4.	Concentrator plus, complete system with integrated diaphragm vacuum pump with rotor	1	550000.00
5.	Liquid Nitrogen Container	1	53100.00
Total			1010300.00



(Dr. Sangita Kasture)
Scientist 'F'

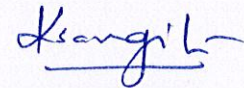
डॉ. संगीता कस्तुरे / Dr. Sangita Kasture
वैज्ञानिक 'एफ' / Scientist 'F'
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology
विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

Annexure -II

Details of the manpower sanctioned for the implementation of the project entitled "**Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients**":

Head	No. of Position	Year I	Year II	Year III	Year IV	Year V	Total (Rs.)
Junior Research Fellow Rs. 31000/-+24% HRA	2	922560	922560	0	0	0	1845120
Senior Research Fellow Rs.35000/-+24% HRA	2	0	0	1041600	1041600	1041600	3124800
Research Associate Rs. 47000/-+24% HRA	1	699360	699360	699360	699360	699360	3496800
Field Assistant/ Field supervisor@ Rs.20000/-+24% HRA	1	297600	297600	297600	297600	297600	1488000
Workers/ Field workers @ Rs.18000/-+24% HRA	7	1874880	1874880	1874880	1874880	1874880	9374400
Total(Rs.)		3794400	3794400	3913440	3913440	3913440	19329120

Emoluments 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-08/2018 dated 30.01.2019 for JRF/SRF/RA and OM No. SR/S9/Z-05/2019 dated 21.08.2019 for all other categories.



(Dr. Sangita Kasture)
Scientist 'F'

डॉ. संगीता कस्तूरे / Dr. Sangita Kasture
वैज्ञानिक 'एफ' / Scientist 'F'
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology
विज्ञान और प्रौद्योगिकी, मंत्रालय / M/o Science & Tech.
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

M Gmail

3rd Grant Sandip
le Hem
SK Basak

Gmail - SERB-Notification

Sandip Basak <sandipbasak9592@gmail.com>

SERB-Notification

1 message

SERB_Administrator@serbonline.in <SERB_Administrator@serbonline.in>
To: serbinfo1@gmail.com

Wed, May 27, 2020 at 12:18 PM



Science and Engineering Research Board (Statutory Body Established Through an Act of Parliament : SERB Act 2008) Department of Science and Technology, Government of India

FILE NO. EMR/2016/005262

SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(a statutory body of the Department of Science & Technology, government of India)

5 & 5A, Lower Ground Floor
Vasant Square Mall
Plot No. A, Community Centre
Sector-B, Pocket-5, Vasant Kunj
New Delhi-110070

Dated: 20-May-2020

ORDER

Subject: Research project entitled "Study of reproductive biology of mangrove species in Sundarbans in correlation to its potential for mangrove restoration" under the guidance of Dr. SANDIP KUMAR BASAK, Botany, Sarat Centenary College, Dhaniakhali, Hooghly, West Bengal-712302.

1. This is in continuation of SERB's sanction order No. "EMR/2016/005262" dated "31 July, 2017" of Science and Engineering Research Board (SERB).
2. Sanction of the competent authority is hereby accorded to the payment of a sum of Rs. 600000/- (Rupees Six Lakh only) under 'Grants-in-aid General' to Principal, Sarat Centenary College, Dhaniakhali being the 3rd grant for the financial year 2020-2021 for implementation of the above said project.
3. Sanction of the competent authority is also accorded to the carry forward of unspent balance of Rs. 12618/- (Rupees Twelve Thousand Six Hundred and Eighteen only) (Recurring Rs. 12596 and Non-Recurring Rs. 22) to Sarat Centenary College, Dhaniakhali from FY 2019-2020 to FY 2020-2021 for the same purpose for which it was sanctioned.
4. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in).
5. It is certified that provision of GFR 212 relating to Utilization Certificates (Ucs) for the funds released under the grant have been satisfied and the UC/s is/are enclosed herewith.

<https://mail.google.com/mail/u/0?ik=77b0de5669&view=pt&search=all&permthid=thread-f%3A1667825279906676583&siml=msg-f%3A16678252799>

Administrative
(Application No: AGRI/2015/42)

File No. BT/PR16610/NER/95/221/2015
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
(NER-BPMC)

Block-2, 7th Floor,
CGO Complex, Lodhi Road
New Delhi-110003

Dated: 13 / 10 / 2016

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 under 'DBT's Twinning programme for the NE' titled "An in-depth study of host-non-mulberry silkworm interaction with special reference to extra floral nectaries (EFN) and volatile organic chemicals (VOC) of host plants and the silkworm's adaptations to the host plant's defense response" by Dr. Dipsikha Bora, Dibrugarh University, Dibrugarh and Dr. Krishna Ray, West Bengal State University, Kolkata, West Bengal at a total cost of ₹ 62.90 lakhs (Rupees Sixty Two lakhs and Ninety thousand only) for a period of three years on the terms and conditions detailed as under:

2.0 The Project:

2.1 Project Title: An in-depth study of host-non-mulberry silkworm interaction with special reference to extra floral nectaries (EFN) and volatile organic chemicals (VOC) of host plants and the silkworm's adaptations to the host plant's defense response.

2.2 Project Investigators

2.2.1 Principal Investigator:
(Parent Institute)

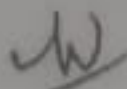
Dr. Dipsikha Bora
Professor
Department of Life Sciences
Dibrugarh University
Dibrugarh- 786004, Assam

2.2.2 Co-Investigator.:
(Parent Institute)

Dr. Devid Kardong
Assistant Professor
Department of Life Sciences
Dibrugarh University,
Dibrugarh- 786004, Assam

2.2.3 Principal Investigator:
(Collaboration Institute)

Dr. Krishna Ray
Assistant Professor
Dept. of Botany
West Bengal State University,
Berunanpukuria, Malikapur, Barasat,
Kolkata- 700126, West Bengal.



BT/PR39375/FCB/125/51/2020
Government of India
Ministry of Science & Technology
Department of Biotechnology

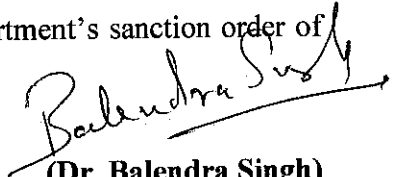
Block 2, 7th Floor
CGO Complex, Lodhi Road
New Delhi 110 003
Dated: 12th May, 2022

Addendum

In continuation of this departments' sanction order of even no. dated 17th March, 2022 of the project entitled "**Development of Biological Control Technology for invasive species *Polyalthia suberosa* Hamjam in wild life Sanctuary of Bethuadahari West Bengal**" being implemented at West Bengal State University, Kolkata, West Bengal, The name of Co-Investigators are included as per following details-

S.N.	Details
1.	Dr. Sandip Kumar Basak, Sarat Centenary College (Affiliated to the University of Burdwan, West Bengal) Dhaniakhali, Hooghly, West Bengal
2.	Dr. Arup Kumar Mitra, St. Xavier's College(Autonomous) Kolkata (affiliated to the University of Calcutta)
3.	Mr. Rana Datta, Deputy Conservator of Forests & Divisional Forest Officer, Nadia Murshidabad Division, Directorate of Forests, Govt of West Bengal

2. The other terms and conditions of the project as given in the Department's sanction order of dated 17th March, 2022 will remain unchanged.

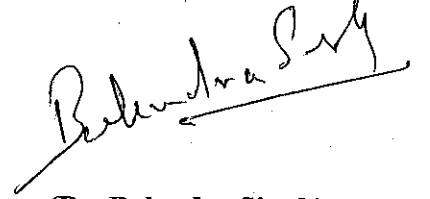

(Dr. Balendra Singh)
Scientist 'C'

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-110 002.
2. The Registrar, West Bengal State University, Barasat, Berunanpukuria, Malikapur, North 24 Praganas, Kolkata - 700126, West Bengal
3. Dr. Krishna Ray, Assistant Professor, Botany, West Bengal State University Berunanpukuria, Malikapur, Barasat West Bengal, Kolkata - 700126, West Bengal

4. Dr. Sandip Kumar Basak, Sarat Centenary College (Affiliated to the University of Burdwan, West Bengal) Dhaniakhali, Hooghly, West Bengal
5. Dr. Arup Kumar Mitra, St. Xavier's College (Autonomous) Kolkata (affiliated to the University of Calcutta)
6. Mr. RanaDatta, Deputy Conservator of Forests & Divisional Forest Officer, Nadia Murshidabad Division,
7. Directorate of Forests, Govt of West Bengal
8. Cash Section, DBT (2 copies).
9. Sanction Folder.
10. File Copy



(Dr. Balendra Singh)
Scientist 'C'

No. BT/PR39375/FCB/125/51/2020
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi- 110 003
Dated:17/03/2022

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 "**Development of Biological Control Technology for invasive species, Polyalthiasuberosa, Hamjam, in Wild Life Sanctuary of Bethuadahari, West Bengal**" for a period of 3 Year 0 Month at a total cost of Rs. **3983360** (Rupees Thirty Nine Lakhs Eighty Three Thousand Three Hundred and Sixty Only) on the terms and conditions detailed here under:-

2 The Project :

2.1 Title : **Development of Biological Control Technology for invasive species, Polyalthiasuberosa, Hamjam, in Wild Life Sanctuary of Bethuadahari, West Bengal**

2.2 Details of the Investigators:

Dr. Krishna Ray
Assistant Professor
Department of Botany
West Bengal State University
Berunanpukuria, Malikapur, Barasat, Kolkata, West Bengal, 700126

2.3 Objectives:

1. Study of invasion mechanisms of the invasive species Polyalthiasuberosa (commonly called "Hamjam") in the Wild Life Sanctuary of Bethuadahari
2. Detection and isolation of any fungal/rhizobacterial pathogen of "Hamjam" showing lethal disease/growth suppression solely specific to the invader species and native to the Wild Life Sanctuary
3. Optimization of the field application of the bio-control agent/agents in model plot of 5 acres in the "Hamjam" infested area of the sanctuary

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. **3983360/-** (Rupees Thirty Nine Lakhs Eighty Three Thousand Three Hundred and Sixty Only) as per details given below:

Budget Head	Year I	Year II	Year III	Total (Rs.)
Equipment	1780000.00			1780000.00
Manpower	922560.00	0.00	520800.00	1443360.00
Overhead	20000.00	20000.00	20000.00	60000.00
Travel	20000.00	20000.00	20000.00	60000.00
Consumables	180000.00	180000.00	180000.00	540000.00
Contingency	40000.00	30000.00	30000.00	100000.00
Total (Rs.)	2962560.00	250000.00	770800.00	3983360.00

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:

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
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 other terms and conditions governing this sanction are attached at Annexure- III.
- 4.2 A 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 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
- 4.3 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 Koshportal(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 Registrar, West Bengal State University, Kolkata, West Bengal 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-05/2019 dated 30 Jan 2019. 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 Organizations 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 Organizations is called upon to do so.
9. The equipment /Instrument shall have to be purchased within eighteen(18) months from the date of release of the capital grant for a particular year. Fresh permission shall have to be sought from DBT in the event the organization fails to purchase the equipment/instrument within the prescribed period of eighteen (18) months from the date of release of sanctioned amount
10. It is mandatory to acknowledge financial support provided by DBT in bold letters via inclusion of Grant reference number, Name of the Department (i.e. DBT) and the duration of the financial support including the dates in acknowledgement section of publications/patents/technology transfer documents/media communications/press announcements/exhibitions and other such events, vide notification no. DBT/PCAH/Gen/01 dated 07.06.2012 during and after the completion of the project
11. It is obligatory to assess/observe the biosafety compliance for rDNA activities to be performed by grantee organization(s) and investigators for the proposals submitted to DBT for financial support as per the notification vide no. BT/BS/17/459/2011-PID dated 26.09.2012
12. Medical allowance will not be paid with Manpower salary, as medical benefits are not part of salary component. The research fellows (JRF/SRF/Research Associate) will be entitled for Medical allowance from the implementing Institutions as applicable
13. 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
- 14 (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."
15. If this project works requires any Statutory Clearance (such as Ethical Committee Clearance, Informed Consent, Animal Ethics Committee Clearance, Institutional Bio-safety Committee Clearance, National Biodiversity Authority approval etc.), Project investigator(s) and Host Institution(s) shall compulsorily comply the same before undertaking such activities
- 16 Continuation of the project beyond 31.3.2021 will be subject to appraisal and approval of the DBT umbrella scheme on "Biotechnology Research and Development" for continuation beyond 14th FCC
As per Ministry of Finance OM.NO.C-13015(34)MF CGA/PFMS/Misc/2014-15/2095-2127 dated 03.03.2015 all transaction involving cash component has to be made through Public Financial Management System (PFMS) w.e.f 01.04.2015 to each beneficiaries.
17. As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organizations 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 Organizations is called upon to do so.
18. The expenditure by the implementing agency is to be incurred only through the EAT module of PFMS.
19. This issues, under the power delegated to this Department and with the concurrence of IFD vide their
- 20 SAN No. **102/IFD/SAN/3425/2021-22** dated **17/032022**
21. This sanction order has been noted at serial no. 27 in the Register of Grants

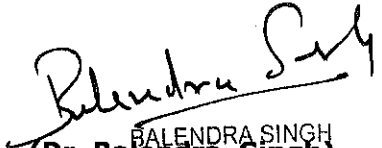
Balendra Singh
(Dr. Balendra Singh)
Scientist C

Department of Biotechnology
Govt. of India
C.G.O. Complex, Lodhi Road
New Delhi-110008

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

Copy to:

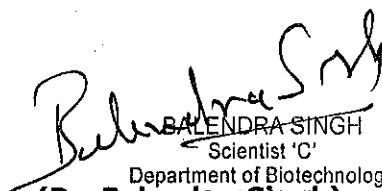
- 1 The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi- 110 002.
- 2 The Registrar, West Bengal State University, Barasat, Berunanpukuria, Malikapur, North 24 Praganas, Kolkata - 700126, West Bengal
- 3 Dr. Krishna Ray, Assistant Professor, Botany, West Bengal State University Berunanpukuria, Malikapur, Barasat West Bengal, Kolkata - 700126, West Bengal
- 4 Cash Section, DBT (2 copies).
- 5 Sanction Folder.
- 6 File Copy.


(Dr. Balendra Singh)
BALENDRA SINGH
Scientist
Department of Biotechnology
Govt. of India
C.G.O. Complex, Lodhi Road
New Delhi-110003

Annexure -I

Details of the Equipment sanctioned for the implementation of the project entitled "**Development of Biological Control Technology for invasive species, Polyalthiasuberosa, Hamjam, in Wild Life Sanctuary of Bethuadahari, West Bengal**":

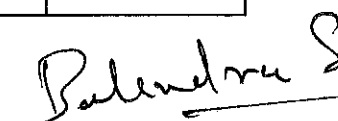
West Bengal State University			
SNo.	Name of Equipment	No.	Cost(Rs.)
1.	-86°C Freezer, Model: U410-86	1	650000.00
2.	UPRIGHT TRINOCULAR RESEARCH MICROSCOPE WITH IN-BUILT HD RESOLUTION 9" LCD SCREEN AND DEDICATED CAMERA ATTACHMENT	1	380000.00
3.	Laminar Flow Clean Air Work Station (Horizontal)	1	250000.00
4.	Culture Room facility	1	500000.00
Total			1780000.00


BALENDRA SINGH
 Scientist 'C'
 Department of Biotechnology
 Govt. of India
(Dr. Balendra Singh)
 C.G.O. Complex, Lodhi Road
 New Delhi-110003

Annexure -II

Details of the manpower sanctioned for the implementation of the project entitled "**Development of Biological Control Technology for invasive species, Polyalthiasuberosa, Hamjam, in Wild Life Sanctuary of Bethuadahari, West Bengal**":

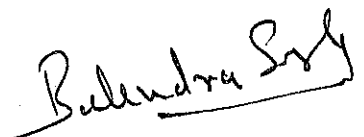
Head	No. of Position	Year I	Year II	Year III	Total (Rs.)
Junior Research Fellow Year 1 & 2 Rs.31000/-p.m +24%HRA	1	461280	461280	0	922560
Senior Research Officer Rs.35000/-+24%HRA	1	0	0	520800	520800
Total(Rs.)		461280	461280	520800	1443360


BALENDRA SINGH
 Scientist 'C'
 Department of Biotechnology
 Govt. of India
(Dr. Balendra Singh)
 C.G.O. Complex, Lodhi Road
 New Delhi-110003

Quarterly Deliverables of the project:-

	Quarterly Deliverables of the project	Time line
1.	<ol style="list-style-type: none"> 1. Advt. publication 2. Staff recruitment 3. Initiation of Purchase and procurement process of instruments 4. Survey for exclusive disease or growth suppression symptoms in WLS, Bethuadahari 	Q1[0-3 Months]
2.	<ol style="list-style-type: none"> 1. Quadrat study in WLS to prove dominance of invasive species referred 2. Seed output, viability, dispersal, entire life cycle of invader study 3. Invader seed germination, seedling maintenance optimization under control culture room 4. Start of causal organism isolation and pure culture establishment associated with disease symptom and growth suppression phenotype exclusively observed for the invasive species 	Q2
3.	<ol style="list-style-type: none"> 1. molecular identification of disease causing/growth suppressing causal Q3 organisms by ribosomal RNA gene sequencing (18SrRNA/ITS/16SrRNA) 2. Start of Rhizospheric microbial population (AMF, mutualistic bacterial population) isolation from rhizosphere of invader and native species 3. Seed collection from native/invader species and optimization of seedling growth under control culture room 	Q3
4.	<p>Allelopathic effect of invader if any to be proved by</p> <ol style="list-style-type: none"> 1. Impact of leaf leachates/root-exudates/ rhizospheric soil/rhizospheric soil microbes of the invader species on seed germination and growth of other native species of the sanctuary under control culture room 2. Assay of probable presence of any allelochemical like catechin, L-tryptophan, methyl jasmonate etc. through HPLC analyses in the root exudates/leaf leachate/rhizospheric soil extract of the invader. HPLC optimization may take some more time 	Q4
5.	<ol style="list-style-type: none"> 1. Conclusion to be drawn on role of "Hamjam" leaf litter/root exudate on resident plant population (both field and laboratory studies) 2. Conclusion to be drawn on role of rhizospheric microbial population on native plant population (both field and laboratory studies) 3. Start of assay of growth suppression by rhizobacteria established in pure culture to be screened for growth negating parameters. 4. Start of host range specificity studies of the pathogenic fungus under control culture room condition 	Q5
6.	<ol style="list-style-type: none"> 1. Assay of growth suppression of rhizobacteria continued. 2. Host range specificity studies of the pathogenic fungus continued. 3. Growth effect studies to confirm the specificity of growth suppression to be exclusively associated with the invasive species under control condition. 4. Comparative study for efficiency of control of invasive species by fungal pathogen/deleterious rhizobacteria under controlled condition. 	Q6
7.	<ol style="list-style-type: none"> 1. Assay of growth suppression of rhizobacteria continued. 2. Host range specificity studies of the pathogenic fungus continued. 3. Continued growth effect studies to confirm the specificity of growth suppression to be exclusively associated with the invasive species under control condition. 4. Continued comparative study for efficiency of control of invasive species by fungal pathogen/deleterious rhizobacteria under controlled condition 	Q7

8.	<ol style="list-style-type: none"> 1. Conclusion on invasion mechanism 2. Conclusion on host range specificity and control efficiency of pathogenic fungus on invasive species 3. Conclusion on host range specificity and control efficiency of deleterious rhizobacteria, if any on invasive species 4. Comparative statement on efficiency of control and host specificity among fungal pathogen/ growth inhibiting rhizobacteria on invasive species 	Q8
9.	<ol style="list-style-type: none"> 1. Continuation of host range specificity studies, if unfinished yet 2 Optimization of large scale development of spore suspension/bacterial culture asinocula for application to the field. 3. Optimization of the appropriate time of application in field. 	Q9
10.	<ol style="list-style-type: none"> 1. Ideal plot selection in WLS for field application 2. Approximate stage of plant to be chosen 3. Selection of untreated control plots for comparison 4. Appropriate dose of biocontrol agent decided for field application 5. Field application initiated 	Q10
11.	Monitoring the effect of application of the developed bio-control agent in model plots infested with the invasive species in terms of growth, mortality and spread,throughout several seasons under different climatic conditions keeping untreated control plots for comparison	Q11
12.	<ol style="list-style-type: none"> 1. Monitoring the effect of application of the developed bio-control agent in model plots continued 2. Monitoring the effect of single application and multiple applications of biocontrolagent/agents. 3. Monitoring the effect separately or in a synergistic manner. 4. Recovery of the inoculated pathogen, persistence of inoculated pathogen, intensity of infection/association in field on invasive species population. 5. Measuring control efficiency of biocontrol agent applied, right from the field. 6. Estimation of re-emergence frequency of the invasive species after initial field application 	Q12


(Dr. Balendra Singh)
Scientist C
 Department of Biotechnology
 Govt. of India
 C.G.O. Complex, Lodhi Road
 New Delhi-110003



West Bengal Pollution Control Board
(Department of Environment, Government of West Bengal)
"Paribesh Bhavan" 10A, Block – LA, Sector-III,
Bidhannagar, Kolkata- 700 106
Tel: 2335 9088/8100 & Fax 8073/2813

Memo No: 3398-2022-RHRB/1/C. Lab

Date: 05.12.2022

LETTER OF AWARD

To
Dr. Krishna Ray
Associate Professor, Deptt. Of Botany
West Bengal State University
Berunanpukuria, Malikapur,
Barasat, North 24 Pgs,
Kolkata 700 126

Sub: Project on "In Situ Bioremediation Approach at Two Drains Leading to Noai Khal (falling on the River Bidyadhari) and Khardah Khal (falling on the River Hooghly) Respectively for Effective Removal of Pollutants in Domestic Sewage"

Ref: Project. proposal submitted by Dr. Krishna Ray, Associate Professor, Deptt. Of Botany West Bengal State University, Berunanpukuria, Malikapur, Barasat, North 24 Pgs, Kolkata 700 126

Madam,

With reference to above, this is to inform you that the West Bengal Pollution Control Board (WBPCB) is pleased to accept your proposal and award the project work mentioned under subject above under terms and conditions as detailed below.

- Project Title:** **In Situ Bioremediation Approach at Two Drains Leading to Noai Khal (falling on the River Bidyadhari) and Khardah Khal (falling on the River Hooghly) Respectively for Effective Removal of Pollutants in Domestic Sewage**
- Principal investigator:** Dr. Krishna Ray, Associate Professor, Deptt. Of Botany, West Bengal State University, Berunanpukuria, Malikapur, Barasat, North 24 Pgs, Kolkata 700 126, E mail: kray91@gmail.com
- Name of Co-Investigator** Prof. Punyasloke Bhadury, Center for Climate and Environmental Studies, Indian Institute of Science education and Research Kolkata

4. **Name of Co-Investigator** Prof. Bhoopesh Mishra, Research and Development Director (Honorary), Aqua Avani Aerobio production unit (Mr. Watinuksung Jamir)
5. **Name of Co-Investigator** Dr. Sandip Kumar Basak, Sarat Centenary College, Dhaniakhali, Hooghly, WB, Pin -712302
3. **Project coordinator:** Dr. Anada Banerjee, Scientist WBPCB
3. **Duration of project:** Six (06) Months
Actual date of project initiation to be informed by Dr. Krishna Ray, Associate Professor, Deptt. Of Botany, West Bengal State University, Berunanpukuria, Malikapur, Barasat, North 24 Pgs, Kolkata 700 126
4. **Study matter:** Two major open drains through which municipal sewage are discharged directly into the Noai Canal falling on the Bidyadhari river as well as Khardah Canal falling on the River Hooghly on a daily basis.
5. **Project Objectives:**
- (a). Onsite in situ novel free Water Surface (FWS) constructed Wetland approach to cause water quality improvement of domestic sewage water of Nohai and Khardah canal drains falling on the River Bidyadhari and falling on the River Hooghly respectively for effective removal of pollutants in domestic sewage.
- (b). Onsite in situ novel application of functionalized biochar coated with metabolically superior bacterial consortia to cause water quality improvement of domestic sewage water of Nohai and Khardah canal drains falling on the river Bidyadhari and falling on the River Hooghly respectively for effective removal of pollutants in domestic sewage.
- (c). Feasibility of the scaling up of these combined approach on in situ bioremediation of domestic sewage water of other canal drain sources.
6. **Methodology:**
- I. **Onsite in situ novel free Water Surface (FWS) constructed Wetland approach to cause water quality improvement of domestic sewage water of Nohai and Khardah canal drains falling on the River Bidyadhari and falling on the River Hooghly respectively for effective removal of pollutants in domestic sewage.**
- a. Constructed wetland is fully flooded with water, for which reason it can be similar to natural

wetland. The aim to plant selective hydrophytes in such way at the point sources of Nohai and Khardah canal drains with series of planted flooded beds so that it will resemble a natural wetland.

- b. The pollutants are supposed to get flashed out by means of natural processes. The organic matter gets trapped during sedimentation process and eventually accumulates at the bottom of the beds.
- c. The rhizospheric zones of these hydrophytes will attract decomposing bacteria. Contaminants present in wastewater are supposed to be reduced by microbial and plant absorption.
- d. Usually free water surface constructed wetland is used in advance treatment followed by secondary and tertiary treatment processes.
- e. A combination of native emergent macrophytes, submerged macrophytes and free -floating macrophytes will be planted onsite near the drain and up to some distance at preliminary level. Emergent species will be used are *Phragmites spp.*, *Typha spp.*, *Marsilea quadrifolia*, *Juncus spp.*, *Acorus spp.*, *Carex spp.*, & *Eleocharis spp.* Submerged plants will be used are *Nelumbo*, *Nymphaea*, *Hydrilla*, *Ceratophyllum demersum*, *Vallisneria natans*, *Myriophyllum verticillatum*, *Potamogeton crispus*. Floating plants will be used are *Nymphoides*, *Trapa bispinosa*, *Hydrocharis dubia*, *Lamna minor*.

II. Onsite in situ novel application of functionalized biochar coated with metabolically superior bacterial consortia to cause water quality improvement of domestic sewage water of Nohai and Khardah canal drains falling on the river Bidyadhari and falling on the River Hooghly respectively for effective removal of pollutants in domestic sewage.

- a. A novel in situ bioremediation approach for cleaning of point sources such as open drains through which municipal sewage are discharged directly into the Nohai Canal and Khardah Canal on a daily basis.
- b. In particular, sewage released from these open drains have unusually high fecal coliform bacterial load.
- c. The application of functionalized biochar coated with metabolically superior bacterial consortia. The biochars with bacterial consortia when applied in situ in these drains will completely breakdown total dissolved solids, Suspended Solids, as well as inhibit growth of Fecal Coliforms, in addition to utilization of complex forms of carbon and

nitrogen present in effluents. Moreover, the activated biochar-based biopolymer hydrogels with engineered porosity can itself remove substantial amount and types of contaminants including pesticides, heavy metals, antibiotics, microplastic, among others that may be present in sewage of open drains.

III. Feasibility of the scaling up of these combined approach on in situ bioremediation of domestic sewage water of other canal drain sources

- a. Dissolved Oxygen (By probe / by manual Winkler Azide Modification Method)
- b. Biochemical Oxygen demand (3 days 27°C)
- c. Chemical Oxygen Demand (Open refluxed Method)
- d. Total Nitrogen (Persulfate Digestion Method)
- e. Ammonia (Phenate Spectrophotometric)
- f. Nitrate (spectrophotometer)
- g. Total Phosphorus(spectrophotometer)
- h. Multiple Tube fermentation Technique for Coliform Bacteria (MPN test)/ by kit
- i. Membrane Filtration Method for total coliform and thermotolerant (fecal) coliforms
- j. EC-MUG Tes for confirmation of E. coli.

7. **Submission of reports and deliverables:** (a). Final project report of Noahi Canal and Khardah Canal in five hard copies and one soft copy after completion of project.

8. **Project cost:** (a). **Total project cost for Six Months = Rs. 21,10, 000.00/- only (Rupees Twenty-one Lakh Ten Thousand only)**
 (b). The project cost will be spent as per following schedule:

**A. Non-Recurring (e.g. Equipments, accessories)
 (One time)**

West Bengal State University

Sl no	Items	Price in Rs.	Total Price in Rs
1.	Heating mantel	1800	1800
2.	BOROPURE GLASS FIOLTRATION ASSEMBLY with silicon stopper , 47 mm	13985	13985
3.	Vacuum Pump	15000	15000
4.	Desiccator Set with cover & Porcelain Plate	9515	9515
5.	COD digestion unit (with tube and condenser)	55000	55000
6.	Water Bath (for condensation with digital panel)	15000	15000

7.	Stirrers (Magnetic Hot Plate Stirrer)	8700	8700
8.	Transilluminator (for molecular identification of microbes)	141600	141600
9.	DO meter	55000	55000
10.	Centrifuge Mini Spin	94400	94400
Sub total of A			410000

**B. Recurring (for 6 months)
West Bengal State University**

B.1 Manpower

Sl no.	Position No.	Consolidated Emoument	Total for 3 months in Rs
1	Project Fellow (2) @ 25000p.m *6 months	150000*2=300000	300000
2	Manual labour on daily wage needed at onsite for vegetation collection, planting , maintenance and biochar+consortia charging	200000	200000
Sub Total of B .1			5,00000

**B.2 Consumables
West Bengal State University**

Sl no.	Item	In Rs	Total
1	Chemicals	200000	200000
2	Glassware	100000	100000
Indian Institute of Science Education and Research Kolkata			
1.	Chemicals	800000	800000
Sub Total of B .2			1100000

B.3

Sl no.	Item	For 6 months in Rs	Total
1.	Travel (WBSU)	50000	50000

B.4

Sl no.	Item	For 6 months in Rs	Total
1.	Contingency (WBSU+IISER kolkata)	25000+25000	50000

B.5

Sl no.	Item	For 6 months in Rs	Total
1.	Overhead (If applicable)	0	0

Subtotal of B (B.1+B.2+B.3+B.4+B.5) =
(5,00000+1100000+50000+50000+0) = **1700000**

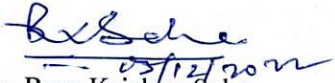
GRAND TOTAL = (A+B) = (410000+1700000) = 21,10,000/-

Total project cost will include all activities under the project as mentioned in this Letter of Award and submission of final reports and other deliverables as mentioned in Clause 7 above.

9. Terms of payments Payments will be made in A/c Payee cheque(s) favour of West Bengal State University or through Bank Transfer. The PI has to inform the Bank Account details of the Institution.
- a. The 1st installment of payments of Rs. 10,30,000/- as mobilization advance will be paid after acceptance of letter of Award and submission of information on project start date and claim bill in triplicate for the said amount.
 - b. The 2nd installment of payments after 3 months of Rs. 10,30,000/- will be paid after acceptance of claim bill and utilization certificate of the mobilization advance for adjustment.
 - c. Final installment of Rs. 50,000/- of contingency will be paid after acceptance of the final reports and all other deliverables as per Clause 7 above, utilization certificate for entire project cost and claim bill in triplicate for the said amount.
10. Termination:
- a. WBPCB shall have the right to change the scope of work including termination of the work as deemed fit case of any breach of contract.
 - b. If at any time it is noticed that project is discontinued without prior intimation to the WBPCB, the project may be cancelled without showing any further reason.
11. Other Terms Conditions:
- a. In case of dispute, if any, decision of the Member Secretary of the WBPCB shall be final and binding.
 - b. The *data*, information generated and the instruments/hardware developed through the project being the WBPCB's property, its reproduction for publication or use after the project period in any form will require prior approval from the WBPCB, otherwise the WBPCB may take necessary action.
 - c. The WBPCB has no liability for any recruitment for this project work.
 - d. All Instruments and assets under this project shall be returned to the State Board after completion of the project and before payment of the final installment.

12.

If you agree to the above terms and conditions, please return to the duplicate copy of this order duly signed and sealed as a token of your acceptance confirming us the date of commencement of this project and other documents as detailed above required for further processing.


Dr. Ram Krishna Saha
Chief Scientist, WBPCB

FILE NO. CRG/2022/009348-G
SCIENCE & ENGINEERING RESEARCH BOARD(SERB)
(A statutory body of the Department of Science & Technology, Government of India)
Science and Engineering Research Board
3rd & 4th Floor, Block II
Technology Bhavan, New Mehrauli Road
New Delhi - 110016


Dated: 04 July, 2023

ORDER

Subject: Research project entitled **Exploring the ecological potential of a lesser known carragenophyte *Catenella* spp. as an environmental/climate change bio-indicator based on its life cycle and biology of carrageenan biosynthesis for Indian Sundarbans mangrove ecosystem** under the guidance of Dr. Krishna Ray, Botany, West Bengal State University, Barasat govt. college, annexe building, 10, knc road kolkata, Kolkata, West bengal-700124 and by Dr. SANDIP KUMAR BASAK, Principal, Sarat Centenary College.

1. In continuation of SERB's sanction order No. CRG/2022/009348 dated 04 July, 2023, sanction of the competent authority is hereby accorded to the payment of a sum of **Rs.1043397/-** under 'Grants-in-aid General' to West Bengal State University, Barasat Govt. College, Annexe Building, 10, Knc Road Kolkata, Kolkata, West Bengal-700124 being the grant for the financial year 2023-2024 for implementation of the above said project.
2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 04 July, 2023.
3. As this is the first grant being released under 'Grants-in-aid General' for the project, no previous U/C is required.
4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (**Organismal and Evolutionary Biology(Plant Sciences)**) (General) .
5. The Sanction has been issued with the approval of the competent authority on **12 June, 2023** and vide Diary No. **SERB/F/2244/2023-2024** dated **15 June, 2023**.
6. The release amount of **Rs. 1043397/-** (Rupees Ten Lakh Forty Three Thousand Three Hundred and Ninety Seven only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	wbsu
Account Name	WBSU, DBT Project, Dr. Krishna Roy
Account Number	6626687942
Bank Name & Branch	INDIAN BANK Barasat (01693) Uttarayan, Nabapally, 993/1 Barrackpore Road
IFSC/RTGS Code	IDIB000B091
Email id of A/C Holder	fo.wbsu.brst@gmail.com
Email id of PI	kray91@gmail.com

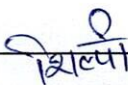

(Dr. Shilpi Paul)
Scientist F
ms_ps@serbonline.in

To,
Under Secretary
SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R.Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB, New Delhi.
3.	File Copy

4.	<p>Dr. Krishna Ray Botany West Bengal State University , Barasat govt. college, annexe building, 10, knc road kolkata, Kolkata, West bengal-700124 Email: kray91@gmail.com Mobile: 919433250057</p> <p>Dr. SANDIP KUMAR BASAK Botany Sarat Centenary College (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit www.serb.gov.in.)</p>
5.	<p>Registrar , West Bengal State University, Barasat Govt. College, Annexe Building, 10, KNC Road Kolkata</p> <p>(Receipt of Grant may be intimated by name to the undersigned)</p>


(Dr. Shilpi Paul)
Scientist F
ms_ps@serbonline.in

FILE NO. CRG/2022/009348

SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

(A statutory body of the Department of Science & Technology, Government of India)

Science and Engineering Research Board
3rd & 4th Floor, Block II
Technology Bhavan, New Mehrauli Road
New Delhi - 110016

Dated: 04 July, 2023

ORDER

Subject: Financial Sanction of the research project titled **Exploring the ecological potential of a lesser known carragenophyte Catenella spp. as an environmental/climate change bio-indicator based on its life cycle and biology of carrageenan biosynthesis for Indian Sundarbans mangrove ecosystem** under the guidance of Dr. Krishna Ray, Botany, West Bengal State University, Barasat govt. college, annexe building, 10, knc road kolkata, Kolkata, West bengal-700124 and by Dr. SANDIP KUMAR BASAK, Principal, Botany, Sarat Centenary College - Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned project at a total cost of **Rs. 4029885/- (Rs. Forty Lakh Twenty Nine Thousand Eight Hundred and Eighty Five Only)** with break-up of **Rs. 1019692/- under Capital (Non-recurring) head** and **Rs.3010193/- under General (Recurring) head** for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 4029885/-** has been approved are given below:

The following budget may be considered for **West Bengal State University, Barasat Govt. College, Annexe Building, 10, KNC Road Kolkata**

S. No	Head	Total (in Rs.)
A	Non-recurring	
1	Equipment -> Centrifuge MiniSpin with standard rotor -> DO meter -> GelDoc -> Turbidity meter with fast tracker	1019692
A'	Total (Non-Recurring)	1019692
B	Recurring Items	
1	Recurring - I : (Research Personnel) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	1383840 1200000 60000
2	Recurring - IV : (Overhead Charges)	366353
B'	Total (Recurring)	3010193
C	Total cost of the project (A' + B')	4029885

- Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website (www.serb.gov.in).
- Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.
- While providing operational flexibility among various subheads under head Recurring-II, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.
- Budget sanctioned under Scientific Social Responsibility (SSR) is meant only for activities enlisted under SSR norms and under no circumstances it can be reappropriated.
- As per rule 211 of GFR, the accounts of project shall be open to inspection by sanctioning authority/audit whenever the institute is called upon to do so.
- The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.

8. The institute will furnish to the SERB, separate Utilization certificate (UCs) financial year wise to the SERB for Recurring (Grants-in-aid General) & Non-Recurring (Grants for creation of capital assets) and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.

9. The institute will maintain separate audited accounts for the project. A part or whole of the grant must be kept in an interest earning bank account which is to be reported to SERB. The interest thus earned will be treated as credit to the institute to be adjusted towards further installment of the grant.

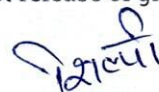
10. The research personnel sanctioned in the project, if any is co-terminus with the duration of the project and SERB will have no liability to meet the fellowship and salary of supporting staff if any. beyond the duration of the project

11. The institute may refund any unspent balance to SERB by means of a Demand Draft favoring "FUND FOR SCIENCE AND ENGINEERING RESEARCH" payable at New Delhi.

12. The project File no. CRG/2022/009348 should be mentioned in all communications arising from the above project. The organization/institute/university should ensure that the technical support/financial assistance provided to them by SERB should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.

13. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by SERB.

14. Sanction order for release of funds under a) Non-recurring and b) Recurring will be issued separately depending on the availability of funds. The project become operational from the day the first release of grant received by the implementing Institute.



(Dr. Shilpi Paul)
Scientist F

ms_ps@serbonline.in

To,
Under Secretary
SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R. Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB, New Delhi.
3.	File Copy
4.	<p>Dr. Krishna Ray Botany West Bengal State University, Barasat govt. college, annexe building, 10, knc road kolkata, Kolkata, West bengal-700124 Email: kray91@gmail.com Mobile: 919433250057</p> <p>Dr. SANDIP KUMAR BASAK Botany Sarat Centenary College (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit www.serb.gov.in.)</p>
5.	<p>Registrar, West Bengal State University, Barasat Govt. College, Annexe Building, 10, KNC Road Kolkata</p> <p>(Receipt of Grant may be intimated by name to the undersigned)</p>



(Dr. Shilpi Paul)
Scientist F

ms_ps@serbonline.in

FILE NO. CRG/2022/009348-C
SCIENCE & ENGINEERING RESEARCH BOARD(SERB)
(A statutory body of the Department of Science & Technology, Government of India)
Science and Engineering Research Board
3rd & 4th Floor, Block II
Technology Bhavan, New Mehrauli Road
New Delhi - 110016

Dated: 04 July, 2023

ORDER

Subject: Research project entitled **Exploring the ecological potential of a lesser known carragenophyte Catenella spp. as an environmental/climate change bio-indicator based on its life cycle and biology of carrageenan biosynthesis for Indian Sundarbans mangrove ecosystem** under the guidance of Dr. Krishna Ray, Botany, West Bengal State University, Barasat govt. college, annexe building, 10, knc road kolkata, Kolkata, West bengal-700124 and by Dr. SANDIP KUMAR BASAK, Principal, Botany, Sarat Centenary College.

1. In continuation of SERB's sanction order No. CRG/2022/009348 dated 04 July, 2023, sanction of the competent authority is hereby accorded to the payment of a sum of **Rs. 1019692/-** under 'Grants-in-aid Capital' to West Bengal State University, Barasat Govt. College, Annexe Building, 10, Knc Road Kolkata, Kolkata, West Bengal-700124 being the grant for the financial year 2023-2024 for implementation of the above said project.
2. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at the website (www.serb.gov.in) and as mentioned in the sanction order of even number dated 04 July, 2023.
3. As this is the first grant being released under 'Grants-in-aid Capital' for the project, no previous U/C is required.
4. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER) This release is being made under Core Research Grant (**Organismal and Evolutionary Biology(Plant Sciences)**) (Capital).
5. The Sanction has been issued with the approval of the competent authority on **12 June, 2023** and vide Diary No. **SERB/F/2243/2023-2024** dated **15 June, 2023**.
6. The release amount of **Rs. 1019692/-** (Rupees Ten Lakh Nineteen Thousand Six Hundred and Ninety Two only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	wbsu
Account Name	WBSU, DBT Project, P.H. Krishna Roy
Account Number	6626687942
Bank Name & Branch	INDIAN BANK Barasat (01693) Uttarayan, Nabapally, 993/1 Barrackpore Road
IFSC/RTGS Code	IDIB000B091
Email id of A/C Holder	fo.wbsu.brst@gmail.com
Email id of PI	kray91@gmail.com



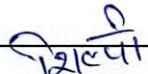
(Dr. Shilpi Paul)
Scientist F
ms_ps@serbonline.in

To,
Under Secretary
SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R. Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB, New Delhi.
3.	File Copy

4.	<p>Dr. Krishna Ray Botany West Bengal State University , Barasat govt. college, annexe building, 10, knc road kolkata, Kolkata, West bengal-700124 Email: kray91@gmail.com Mobile: 919433250057</p> <p>Dr. SANDIP KUMAR BASAK Botany Sarat Centenary College (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit www.serb.gov.in.)</p>
5.	<p>Registrar , West Bengal State University, Barasat Govt. College, Annexe Building, 10, KNC Road Kolkata</p> <p>(Receipt of Grant may be intimated by name to the undersigned)</p>


(Dr. Shilpi Paul)
Scientist F
ms_ps@serbonline.in



Sarat Centenary College



Memorandum of Understanding

This agreement is entered into Between the two institutions **M/s. Roy's Institute of Competitive Examination Pvt. Ltd. (hereinafter RICE Education)**, having its registered office at "Dishari Bhawan" 11/1 B.T. Road, Belghoria, Kolkata, West Bengal, Pin -700056 AND **SARAT CENTENARY COLLEGE, Dhaniakhali, Hooghly, PIN-712302, West Bengal** affiliated College under Burdwan University

Both the institutions Undertake to Promote and Develop Cooperation with each other on various activities as listed below in view of Employability program for the College students.

Rice Education Deliverables:

1. Overall Career Guidance Seminar for all College students/ Alumni of this said institution from UG to PG twice a year
2. Special One- On - One Career Counseling session for the aspirants twice a year
3. Govt. Job Related information Camp time to time through College Placement Cell
4. Free Demo Classes for the aspirants for both Offline and Online Mode twice a year
5. RICE Merit Scholarship Test once a year to offer special fees structure on RICE Offline Courses for deserving candidates
6. Free Mock Interview sessions
7. Free Sample Mock Test sessions for the aspirants time to time
8. Special Motivation Classes from the successful students time to time
9. Share success stories in future with the college placement cell if any

College Deliverables:

1. Cooperation to conduct the above programs as per the on mutual discussion (Date, Time and Schedule)
2. Provide Necessary Infrastructure to Conduct such Sessions
3. There is no fund flow from one institute to another

Terms & Conditions:

1. Any dispute arising during the course of implementation of this initiative will be resolved through mutual discussions by both the Institutions.
2. Termination of this MOU is subject to prior notification of 1 month from any of these 2 Institutions.
3. This MOU will remain valid for a period of five years from the date of signing of the MOU. Further renewal of the MOU will be based on mutual discussion and consent of both the parties.

S.K. Basak
15.12.22
Principal **DR. SANDIP KUMAR BASAK**
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly
SARAT CENTENARY COLLEGE,
DHANIAKHALI

Dutta

Dipanjana Dutta

CEO, RICE Education.

Witness:

Kumar
Coordinator, IQAC
Sarat Centenary College
Dhaniakhali Hooghly

Witness:

Sudip Roy Choudhary
15/12/22

[Signature]
15.12.22





Memorandum for Institutional Linkage

Between

SARAT CENTENARY COLLEGE, DHANIAKHALI, HOOGHLY, WEST BENGAL, 712302

And

GOVERNMENT GENERAL DEGREE COLLEGE, SINGUR, HOOGHLY, WEST BENGAL, 712409

The Institutions:

Sarat Centenary College (Hereinafter "SCC") and **Government General Degree College, Singur** (Hereinafter "GGDCS") recognizing the benefits to their respective institutions from the establishment of intercollege links, concludes this Memorandum of Institutional Linkage (hereinafter: "Linkage").

1. The purpose of this Linkage is to develop academic, research and co-curricular cooperation and to promote mutual understanding between two institutions.
2. Each institute agrees to develop the following collaborative academic activities in the mutual interest on a basis of equality and reciprocity.
 - a. Exchange of academic and academic support staff.
 - b. Exchange of students for special classes.
 - c. Conducting collaborative research projects.
 - d. Conducting lectures and organizing symposia jointly.
 - e. Exchange of academic information and materials.
 - f. Promoting collaboration in the fields of mutual interest.
 - g. Promoting other academic cooperation as mutually agreed.
3. It is understood that the implementation of any of the types of cooperation stated in Clause 2 shall depend upon the availability of the resources of the institution concerned.
4. It is understood that for the implementation of any of the types of cooperation stated in Clause 2 none of the institutions will transmit any financial liability on the other.
5. Both institutes agree that prior written approval is required before using the other institution's name, Logo or other intellectual property rights in any advertising or associated publicity.
6. Should the collaborative research activities under this Linkage result in any potential for intellectual property, each institute shall seek an equitable and fair agreement as to ownership and other property interests that may arise.
7. This Linkage can only be amended or modified by written agreement signed by the representatives of each institution.
8. This Linkage is valid for a period of 5 years from the date of signing by the authorized signature of each institution. Each institution shall review the status of the Linkage every year to determine whether it wishes the Linkage to continue and, if so, any modifications that might be necessary. The period of validity of this Linkage only be extended by the mutual written consent of both institutions.
9. This Linkage may, at any time during its period of validity be terminated by one of the institutions upon prior notice to the other in writing not later than 6 months before the termination date.

10. The institutions may disclose certain confidential information to the other in relation to any future proposal made under this Linkage. Each institution therefore agrees that the contents of this Linkage and the negotiations in relation to any future proposal may remain strictly confidential and each institution hereby undertakes not to disclose the same to any third party, save for its professional advisors, without the prior written consent of the other institution except where such disclosure is required by law (including without limitation, under application freedom of information legislation).

Signed & Dated for and on behalf of
Sarat Centenary College by:

Signed & Dated for and on behalf of
Government General Degree College, Singur by:

S. G. Basak
18/11/2022
Principal
DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly

Santanu Chakrabarti
18/11/2022
Principal
Dr. SANTANU CHAKRABARTI
PRINCIPAL
GOVT. GENERAL DEGREE COLLEGE, SINGUR

Konark
18/11/22
Witness
Coordinator, IQAC
Sarat Centenary College
Dhaniakhali Hooghly

Chaitali Chandra
18/11/22
Coordinator
Witness
IQAC
Govt. General Degree College
Singur

S. G. Basak
1st Year Review:
DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly
2nd Year Review:

Santanu Chakrabarti
1st Year Review:
Principal
Govt. General Degree College, Singur
2nd Year Review:

3rd Year Review:

3rd Year Review:

4th Year Review:

4th Year Review:



SARAT CENTENARY COLLEGE

Affiliated to University of Burdwan
Dhaniakhali * Hooghly



Bejoy Narayan Mahavidyalaya
Affiliated to the University of Burdwan

Memorandum for Institutional Linkage

Between

SARAT CENTENARY COLLEGE, DHANIAKHALI, HOOGHLY, WEST BENGAL, 712302

And

BEJOY NARAYAN MAHAVIDYALAYA, ITACHUNA, HOOGHLY, WEST BENGAL, 712147

The Institutions:

Sarat Centenary College (Hereinafter "SCC") and Bejoy Narayan Mahavidyalaya (Hereinafter "BNM") recognizing the benefits to their respective institutions from the establishment of intercollege links, concludes this Memorandum of Institutional Linkage (hereinafter: "Linkage").

1. The purpose of this Linkage is to develop academic, research and co-curricular cooperation and to promote mutual understanding between two institutions.
2. Each institute agrees to develop the following collaborative academic activities in the mutual interest on a basis of equality and reciprocity.
 - a. Exchange of academic and academic support staff.
 - b. Exchange of students for special classes.
 - c. Conducting collaborative research projects.
 - d. Conducting lectures and organizing symposia jointly.
 - e. Exchange of academic information and materials.
 - f. Promoting collaboration in the fields of mutual interest.
 - g. Promoting other academic cooperation as mutually agreed.
3. It is understood that the implementation of any of the types of cooperation stated in Clause 2 shall depend upon the availability of the resources of the institution concerned.
4. It is understood that for the implementation of any of the types of cooperation stated in Clause 2 none of the institutions will transmit any financial liability on the other.
5. Both institutes agree that prior written approval is required before using the other institution's name, Logo or other intellectual property rights in any advertising or associated publicity.
6. Should the collaborative research activities under this Linkage result in any potential for intellectual property, each institute shall seek an equitable and fair agreement as to ownership and other property interests that may arise.
7. This Linkage can only be amended or modified by written agreement signed by the representatives of each institution.
8. This Linkage is valid for a period of 5 years from the date of signing by the authorized signature of each institution. Each institution shall review the status of the Linkage every year to determine whether it wishes the Linkage to continue and, if so, any modifications that might be necessary. The period of validity of this Linkage only be extended by the mutual written consent of both institutions.
9. This Linkage may, at any time during its period of validity be terminated by one of the institutions upon prior notice to the other in writing not later than 6 months before the termination date.



SARAT CENTENARY COLLEGE

Affiliated to University of Burdwan
Dhaniakhali ✶ Hooghly



Bejoy Narayan Mahavidyalaya
Affiliated to the University of Burdwan

10. The institutions may disclose certain confidential information to the other in relation to any future proposal made under this Linkage. Each institution therefore agrees that the contents of this Linkage and the negotiations in relation to any future proposal may remain strictly confidential and each institution hereby undertakes not to disclose the same to any third party, save for its professional advisors, without the prior written consent of the other institution except where such disclosure is required by law (including without limitation, under application freedom of information legislation).

Signed & Dated for and on behalf of
of Sarat Centenary College by:

Signed & Dated for and on behalf
Bejoy Narayan Mahavidyalaya by:

S. L. Basak 18/11/22

Principal
DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly

[Signature] 18/11/22

Principal
Principal
Bejoy Narayan Mahavidyalaya
P.O. - Itachuna, Dt. - Hooghly.

[Signature] 18/11/2022

Witness
Coordinator, IQAC
Sarat Centenary College
Dhaniakhali Hooghly

[Signature] 18/11/2022

Co-ordinator
Witness
IQAC
Bejoy Narayan Mahavidyalaya
P.O.-Itachuna, Dist.- Hooghly.

S. L. Basak

1st Year Review:
DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly

2nd Year Review:

3rd Year Review:

4th Year Review:

1st Year Review:

2nd Year Review:

3rd Year Review:

4th Year Review:



SARAT CENTENARY COLLEGE

Affiliated to University of Burdwan

Dhaniakhali * Hooghly



বর্গ সুবর্ণ মহাবিদ্যালয়

A Co-Educational Degree College ARTS & COMMERCE & Affiliated to the University of Burdwan & NAAC Accredited with 'B' Grade

Dist. - Hooghly, West Bengal, India, Pin No -712221

Memorandum for Institutional Linkage

Between

SARAT CENTENARY COLLEGE, DHANIAKHALI, HOOGLHY, WEST BENGAL, 712302

And

KABI SUKANTA MAHAVIDYALAYA, BHADRESWAR, HOOGLHY WEST BENGAL 712221

The Institutions:

Sarat Centenary College (Hereinafter "SCC") and **Kabi Sukanta Mahavidyalaya** (Hereinafter "KSM") recognizing the benefits to their respective institutions from the establishment of intercollege links, concludes this Memorandum of Institutional Linkage (hereinafter: "Linkage").

1. The purpose of this Linkage is to develop academic, research and co-curricular cooperation and to promote mutual understanding between two parties.
2. Each institute agrees to develop the following collaborative academic activities in the mutual interest on a basis of equality and reciprocity.
 - a. Exchange of academic and academic support staff.
 - b. Exchange of students for special classes.
 - c. Conducting collaborative research projects.
 - d. Conducting lectures and organizing symposia jointly.
 - e. Exchange of academic information and materials.
 - f. Promoting collaboration in the fields of mutual interest.
 - g. Promoting other academic cooperation as mutually agreed.
3. It is understood that the implementation of any of the types of cooperation stated in Clause 2 shall depend upon the availability of the resources of the institution concerned.
4. It is understood that for the implementation of any of the types of cooperation stated in Clause 2 none of the institutions will transmit any financial liability on the other.
5. Both institutes agree that prior written approval is required before using the other institution's name, Logo or other intellectual property rights in any advertising or associated publicity.
6. Should the collaborative research activities under this Linkage result in any potential for intellectual property, each institute shall seek an equitable and fair agreement as to ownership and other property interests that may arise.
7. This Linkage can only be amended or modified by written agreement signed by the representatives of each institution.
8. This Linkage is valid for a period of 5 years from the date of signing by the authorized signature of each institution. Each institution shall review the status of the Linkage every year to determine whether it wishes the Linkage to continue and, if so, any modifications that might be necessary. The period of validity of this Linkage only be extended by the mutual written consent of both parties.
9. This Linkage may, at any time during its period of validity be terminated by one of the parties upon prior notice to the other in writing not later than 6 months before the termination date.

Principal
18/11/2022
KABI SUKANTA MAHAVIDYALAYA
Bhadreswar, P.O.-Angus, Dist.-Hooghly
Pin.-712221, W.B.

A. G. Basak 18.11.2022
DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly



SARAT CENTENARY COLLEGE

Affiliated to University of Burdwan
Dhaniakhali * Hooghly



কবি সুবর্ণত মহাবিদ্যালয়

A Co-Educational Degree College - ARTS & COMMERCE & Affiliated to the University of Burdwan & NAAC Accredited with 'B' Grade
Dist. - Hooghly, West Bengal, India, Pin No -712221

10. The parties may disclose certain confidential information to the other in relation to any future proposal made under this Linkage. Each institution therefore agrees that the contents of this Linkage and the negotiations in relation to any future proposal may remain strictly confidential and each institution hereby undertakes not to disclose the same to any third party, save for its professional advisors, without the prior written consent of the other institution except where such disclosure is required by law (including without limitation, under application freedom of information legislation).

Signed & Dated for and on behalf of
of Sarat Centenary College by:

Signed & Dated for and on behalf
Kabi Sukanta Mahavidyalaya by:

S. K. Basak
18.11.2022

Manoj Kumar
18.11.2022



Principal

DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly

Principal
KABI SUKANTA MAHAVIDYALAYA
Bhadreswar, P.O.-Angus, Dist.-Hooghly
Pin.-712221, W.B.



Manoj

Witness

Coordinator, IQAC
Sarat Centenary College
Dhaniakhali Hooghly

Sehan Das
Assistant Professor of Sociology
Kabi Sukanta Mahavidyalaya (Stage - II)

Witness

1st Year Review:

1st Year Review:

2nd Year Review:

2nd Year Review:

3rd Year Review:

3rd Year Review:

4th Year Review:

4th Year Review:



SARAT CENTENARY COLLEGE

Affiliated to University of Burdwan
Dhaniakhali • Hooghly



AGHOREKAMINI PRAKASHCHANDRA MAHAVIDYALAYA

AFFILIATED TO THE UNIVERSITY OF BURDWAN & RECOGNISED BY U.G.C.
SUBHASNAGAR, P.O.- BENGAI, DIST- HOOGHLY, PIN-712611, W.B.

Memorandum for Institutional Linkage

Between

SARAT CENTENARY COLLEGE, DHANIAKHALI, HOOGHLY, WEST BENGAL, 712302

And

AGHOREKAMINI PRAKASHCHANDRA MAHAVIDYALAYA, BENGAI, HOOGHLY WEST BENGAL, 712 611

The Institutions:

Sarat Centenary College (Hereinafter "SCC") and Aghorekamini Prakashchandra Mahavidyalaya (Hereinafter "AKPCM") recognizing the benefits to their respective institutions from the establishment of intercollege links, concludes this Memorandum of Institutional Linkage (hereinafter: "Linkage").

1. The purpose of this Linkage is to develop academic, research and co-curricular cooperation and to promote mutual understanding between two institutions.
2. Each institute agrees to develop the following collaborative academic activities in the mutual interest on a basis of equality and reciprocity.
 - a. Exchange of academic and academic support staff.
 - b. Exchange of students for special classes.
 - c. Conducting collaborative research projects.
 - d. Conducting lectures and organizing symposia jointly.
 - e. Exchange of academic information and materials.
 - f. Promoting collaboration in the fields of mutual interest.
 - g. Promoting other academic cooperation as mutually agreed.
3. It is understood that the implementation of any of the types of cooperation stated in Clause 2 shall depend upon the availability of the resources of the institution concerned.
4. It is understood that for the implementation of any of the types of cooperation stated in Clause 2 none of the institutions will transmit any financial liability on the other.
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8. This Linkage is valid for a period of 5 years from the date of signing by the authorized signature of each institution. Each institution shall review the status of the Linkage every year to determine whether it wishes the Linkage to continue and, if so, any modifications that might be necessary. The period of validity of this Linkage only be extended by the mutual written consent of both institutions.
9. This Linkage may, at any time during its period of validity be terminated by one of the institutions upon prior notice to the other in writing not later than 6 months before the termination date.



SARAT CENTENARY COLLEGE

Affiliated to University of Burdwan

Dhaniakhali Hooghly



AGHOREKAMINI PRAKASHCHANDRA MAHAVIDYALAYA

AFFILIATED TO THE UNIVERSITY OF BURDWAN & RECOGNISED BY U.G.C.
SUBHASNAGAR, P.O.- BENGAI, DIST- HOOGHLY, PIN-712411, W.B.

10. The institutions may disclose certain confidential information to the other in relation to any future proposal made under this Linkage. Each institution therefore agrees that the contents of this Linkage and the negotiations in relation to any future proposal may remain strictly confidential and each institution hereby undertakes not to disclose the same to any third party, save for its professional advisors, without the prior written consent of the other institution except where such disclosure is required by law (including without limitation, under application: freedom of information legislation).

Signed & Dated for and on behalf of
Sarat Centenary College by:

Signed & Dated for and on behalf of
Aghorekamini Prakashchandra Mahavidyalaya by:

S. C. Basak 10/09/22

Principal
DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly

[Signature] 10/9/2022

Principal
AGHOREKAMINI PRAKASHCHANDRA MAHAVIDYALAYA
P.O.- Bengai, Dt. Hooghly

[Signature] 10/09/22

Witness
Coordinator, IQAC
Sarat Centenary College
Dhaniakhali Hooghly

[Signature] 10/9/2022

Witness
IQAC Coordinator
AKPC Mahavidyalaya
Bengai, Hooghly

S. C. Basak
1st Year Review:
DR. SANDIP KUMAR BASAK
Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly

[Signature]
1st Year Review:
Principal,
AGHOREKAMINI PRAKASHCHANDRA MAHAVIDYALAYA
P.O.- Bengai, Dt. Hooghly

2nd Year Review:

2nd Year Review:

3rd Year Review:

3rd Year Review:

4th Year Review:

4th Year Review:

भारतीय गैर न्यायिक

दस
रुपये
रु.10



TEN
RUPEES
Rs.10

INDIA NON JUDICIAL

পশ্চিমবঙ্গ পশ্চিম বঙ্গাল WEST BENGAL

86AB 384127

MEMORANDUM OF UNDERSTANDING

BETWEEN

Balagarh Bijoy Krishna Mahavidyalaya
Balagarh, Hooghly -712501, West Bengal.

And

Sarat Centenary College,
Dhaniakhali, Hooghly,-712302, West Bengal.

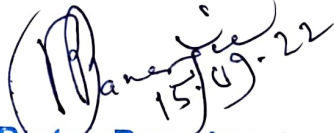
Balagarh Bijoy Krishna Mahavidyalaya, UGC approved NAAC Accredited Government of West Bengal aided college affiliated to the University of Burdwan, situated at Balagarh, Hooghly -712501, West Bengal.

Sarat Centenary College, UGC approved NAAC Accredited Government of West Bengal aided college affiliated to the University of Burdwan, situated at Dhaniakhali, Dist. Hooghly,-712302, West Bengal.

- misunderstandings that may arise in the administration of this MoU or any subsequent associated agreement informally.
4. Neither party can misuse this MoU by involving the name of the other without the written consent from the other party.
 5. There will be no financial involvement by either of the parties unless otherwise agreed.

Disputes

If any dispute arises in respect of the MoU, in that case both the organisations will discuss and settle the matter amicably.


15.09.22

Dr. Pratap Banerjee

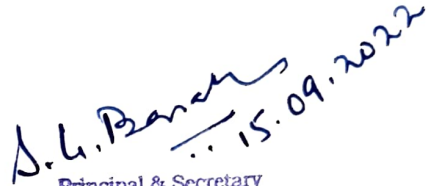
Principal
Balagarh Bijoy Krishna Mahavidyalaya
Balagarh, Hooghly - 712501

(Authorized Signatory)

Dr. Pratap Banerjee

Principal

Balagarh Bijoy Krishna Mahavidyalaya.


15.09.2022

Principal & Secretary
Sarat Centenary College
Dhaniakhali, Hooghly

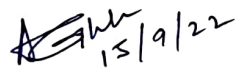
(Authorized Signatory)

Dr Sandip Kumar Basak

Principal

Sarat Centenary College.

WITNESS:


15/9/22

Co-ordinator, IQAC
Balagarh Bijoy Krishna
Mahavidyalaya
Balagarh, Hooghly

WITNESS:


15/9/22

Coordinator, IQAC
Sarat Centenary College
Dhaniakhali Hooghly

BALAGARH BIJOY KRISHNA MAHAVIDYALAYA

P. O. - BALAGARH • DIST. - HOOGHLY • WEST BENGAL - 712 501

NAAC ACCREDITED

Ref. No.

Date

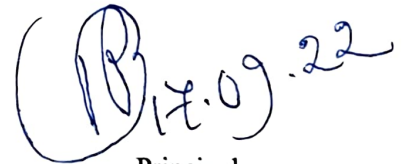
From,

President / Principal / Teacher-in-charge

TO WHOM IT MAY CONCERN

This is to certify that Dr. Ramanuj Konar, Assistant Professor, Dept. of English, of Sarat Centenary College, Dhaniakhali, Dist. Hooghly, attended this College and delivered a special lecture on "Understanding Diaspora and Migration in the Context of Globalisation" to the students on 17.9.2022 as part of Faculty Exchange programme on the basis of MoU between the two colleges.

His excellent knowledge and understanding of the subject and lucid interpretation immensely enriched the students. We highly appreciate his sincerity and effort. We are grateful to his affiliating institution for facilitating this event.



Principal

Balagarh Bijoy Krishna Mahavidyalaya

Principal

Balagarh B. K. Mahavidyalaya
Balagarh, Hooghly, W.B.

BALAGARH BIJOY KRISHNA MAHAVIDYALAYA

P. O. - BALAGARH • DIST. - HOOGHLY • WEST BENGAL - 712 501

NAAC ACCREDITED

Ref. No.

Date

From,

President / Principal / Teacher-in-charge

TO WHOM IT MAY CONCERN

This is to certify that Basudev Halder, Assistant Professor, Dept. of Geography of Sarat Centenary College, Dhaniakhali, Dist. Hooghly, attended this College and delivered a special lecture on “Application of Cartographic Techniques” to the students on 10.9.2022 as part of Faculty Exchange programme on the basis of MoU between the two colleges.

His excellent knowledge and understanding of the subject and lucid interpretation immensely enriched the students. We highly appreciate his sincerity and effort. We are grateful to his affiliating institution for facilitating this event.


Principal

Balagarh Bijoy Krishna Mahavidyalaya

Principal

Balagarh B. K. Mahavidyalaya
Balagarh, Hooghly, W.B.



RICE EDUCATION nicesMart



RICE EDUCATION
भरकारि चाकविर
भरकारि दिना
Bharakar Chakvir
Bharakar Din

ANNIVERSARY



CENTENARY

COLLEGE





saffari



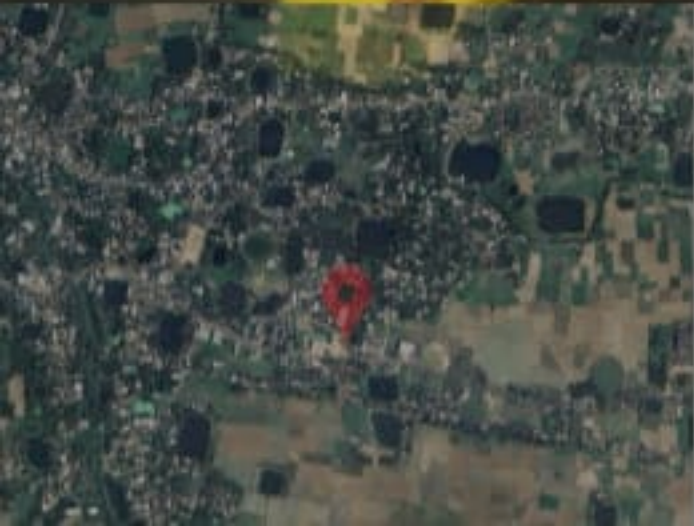


X473+WXJ, Inathnagar, Dhaniakhali, Chapabere, West Bengal 712302, India

Dhaniakhali
West Bengal
India



35°C



JAMALPUR MAHAVIDYALAYA
(Faculty Exchange Programme)

01.09.2022

SOIL PROPERTIES

Basudev Halder
Assistant Professor
Department of Geography
Sarat Centenary College



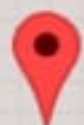
GPS Map Camera

Purba Barddhaman, West Bengal, India
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Lat 22.966122°

Long 88.103936°

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SOIL PROPERTIES

Basudry Haldar

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Department of Soil Science
Jamalpur Mahavidyalaya



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Basudev Halder
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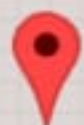
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Dhaniakhali, West Bengal, India

Tarakeswar - Dhaniakhali Road, Dist Hooghly, Inathnagar, Madanmohan Tola,
Dhaniakhali, Chapabere, West Bengal 712302, India

Lat 22.966525°

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24.08.2022

LIBERALISM IN POLITICS

TARAKNATH MUKHERJEE
SACT
Department of Political Science
Sarat Centenary College,
Dhaniakhali, Hooghly



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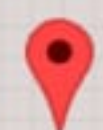
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Jamalpur**

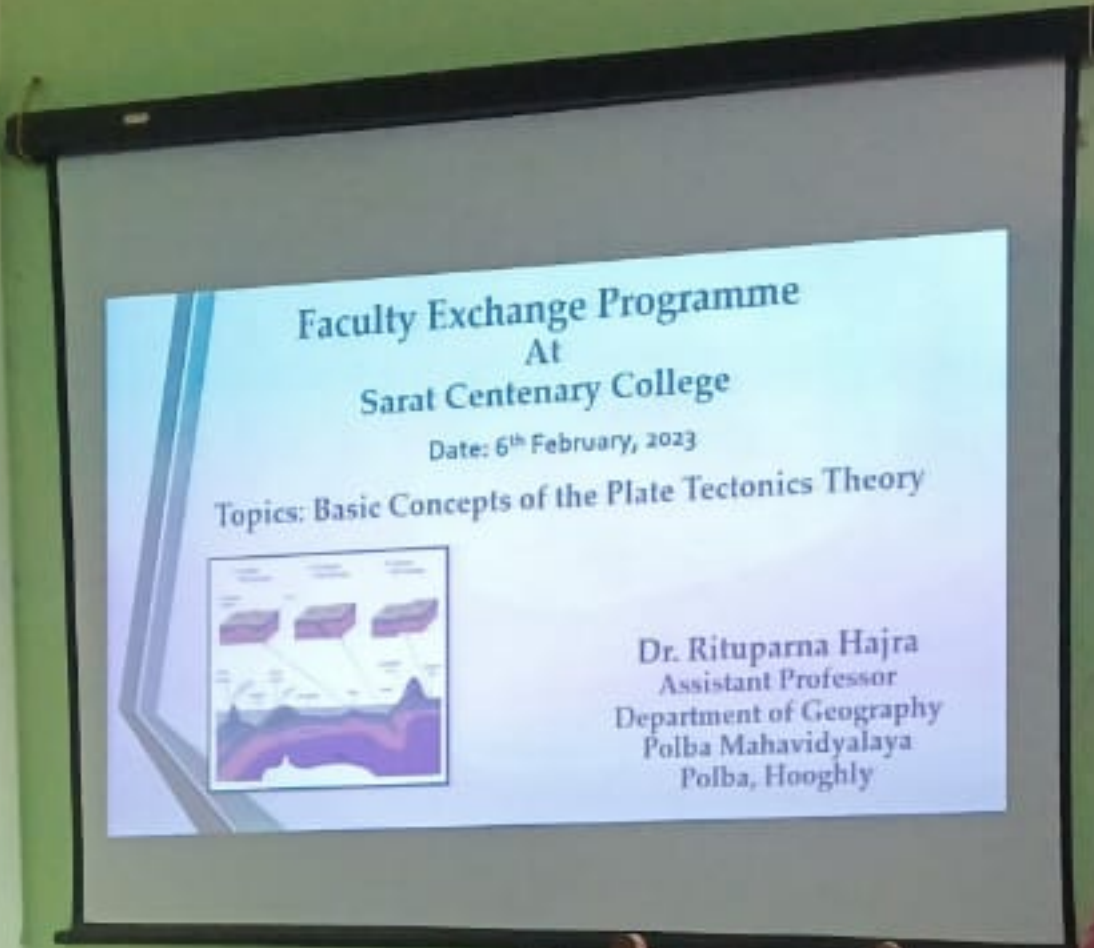
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Dhaniakhali, Chapabere, West Bengal 712302, India
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Long 88.104132°
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