

No. BT/PR31861/BIC/101/1222/2019
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

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

Dated: 13.11.2019

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 ultra-sensitive luminescent paper biosensor for quantification of cadmium and arsenic heavy metal contamination in drinking water and seafood**" for a period of 3 Year 0 Month at a total cost of **Rs.4225853 (Rupees Forty Two Lakhs Twenty Five Thousand Eight Hundred and Fifty Three only)** on the terms and conditions detailed here under:-

2 The Project :

2.1 Title : Development of ultra-sensitive luminescent paper biosensor for quantification of cadmium and arsenic heavy metal contamination in drinking water and seafood

2.2 Details of the Investigators:

PI:

Dr. Manisha Tiwari

Biotechnology department
Goa University
Velvan Court, Ground floor,
St. Merry colony, Miramar,
Panaji, Goa-403001

Mentor:

Prof. Savita Kerkar

Professor & HOD,
Dept. of Biotechnology, Goa University,
Taleigao Plateau, Goa-403001

2.3 Objectives:

1. Development of ultra-sensitive luminescent paper biosensor for quantification of cadmium and arsenic heavy metal contamination in drinking water and seafood

2.4 Time Schedule:

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



डॉ. सुरक्षा एस. दीवान
Dr. Suraksha S. Diwan
वैज्ञानिक 'ई' / Scientist 'E'
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology
विज्ञान और प्रौद्योगिकी, मंत्रालय / M/o Science & Tech.
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

2.5 Project Cost:

The total cost of the project is **Rs.4225853/- (Rupees Forty Two Lakhs Twenty Five Thousand Eight Hundred and Fifty Three only)** as per details given below:

| Budget Head | Year I | Year II | Year III | Total(Rs.) |
|--------------------|-------------------|-------------------|-------------------|-------------------|
| Equipment | 108253.00 | | | 108253.00 |
| Manpower | 859200.00 | 859200.00 | 859200.00 | 2577600.00 |
| Overhead | 60000.00 | 45000.00 | 35000.00 | 140000.00 |
| Travel | 50000.00 | 50000.00 | 50000.00 | 150000.00 |
| Consumables | 500000.00 | 350000.00 | 250000.00 | 1100000.00 |
| Contingency | 50000.00 | 50000.00 | 50000.00 | 150000.00 |
| Total (Rs.) | 1627453.00 | 1354200.00 | 1244200.00 | 4225853.00 |

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 |
| 3425.60.200.29.17.31 | Grants -in-Aid General |

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 |
| 3425.60.200.29.17.35 | Grants for creation of capital assets |

4. Terms & Conditions:

Considering the time bound nature of the project, the project will be monitored by the Task Force/Committee constituted by DBT. In addition, the PI will submit half yearly progress report as per format in Annexure-V.

- 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, Goa University, Goa, Goa would be responsible for submission of Statements of Expenditure (SoE), utilization certificates (UC), Assets Certificates, Manpower staffing & expenditure details in prescribed DBT formats to DBT in respect of grants released in this project from time to time.
7. PI's of DBT sponsored projects can consider appointment of JRF from Category-II merit list of DBT-BET exam so that candidates can be paid fellowships at par with NET/GATE/BET qualified candidates as per DST OM No. A.SR/S9/Z-09/2012 dated 21 Oct 2014. However, there is no compulsion on PI's to select candidates for JRF in their projects from Category-II of DBT-BET.
8. As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or 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 compulsory 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/IFD/SAN/2649/2019-2020** dated **11.11.2019**.
12. This sanction order has been noted at serial no. 92 in the Register of Grants.

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


(Suraksha S. Diwan)
Scientist 'E'
डॉ. सुरक्षा एस. दीवान
Dr. Suraksha S. Diwan
वैज्ञानिक 'ई' / Scientist 'E'
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology
विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

Copy to:

- 1 The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi- 110 002.
- 2 The Registrar, Goa University, Taleigao Plateau, Goa, Goa - 403206, Goa
- 3 Dr. Manisha Tiwari, PI, Biotechnology Department, Goa University, Velvan Court, Ground floor, St. Merry Colony, Miramar, Panaji - 403001, Goa
- 4 Prof. Savita Kerkar, Professor & HOD, Dept. of Biotechnology, Goa University, Taleigao Plateau, Goa-403001.
- 5 Cash Section, DBT (2 copies).
- 6 Sanction Folder.
- 7 File Copy.


(Suraksha S. Diwan)
Scientist 'E'

डॉ. सुरक्षा एस. दीवान
Dr. Suraksha S. Diwan
वैज्ञानिक 'ई' / Scientist 'E'
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भारत सरकार, नई दिल्ली / Govt. of India, New Delhi

Annexure -I

Details of the Equipment sanctioned for the implementation of the project entitled "**Development of ultra-sensitive luminescent paper biosensor for quantification of cadmium and arsenic heavy metal contamination in drinking water and seafood**":

| Goa University | | | |
|----------------|----------------------------------|-----|-----------|
| S No. | Name of Equipment | No. | Cost(Rs.) |
| 1. | Fluorescent microscopy component | 1 | 108253.00 |
| Total | | | 108253.00 |


(Suraksha S. Diwan)
Scientist 'E'

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विज्ञान और प्रौद्योग. मंत्रालय / M/o Science & Tech.
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

Appendix- A

**Assets acquired wholly or substantially out of Government grants
Register to be maintained by Grantee Institution**

Name of the Sanctioning Authority: **Department of Biotechnology (DBT)**

- | | |
|--|---------------------------------|
| 1. Sl. No. | No-BT/PR31861/BIC/101/1222/2019 |
| 2. Name of Grantee Institution | Goa University |
| 3. No. & Date of sanction order | No-BT/PR31861/BIC/101/1222/2019 |
| 4. Amount of the sanctioned grant - | Rs. 42,25,853.00 |
| 5. Brief purpose of the grant | Biosensor project |
| 6. Whether any condition regarding the right of ownership of Govt. in the property or other assets acquired out of the grant was incorporated in the grant -in-aid sanction order. | NO |
| 7. Particulars of assets actually credited or acquired | Nil |
| 8. Value of the assets as on | Nil |
| 9. Purpose for which utilized at present | Nil |
| 10. Encumbered or not | Nil |
| 11. Reasons, if encumbered | Nil |
| 12. Disposed of or not | Nil |
| 13. Reasons and authority, if any, for disposal | Nil |
| 14. Amount realized on disposal | Nil |
| 15. Remarks | |

Manisha Tiwari
Dr. Manisha Tiwari 5/2/2021
(PROJECT INVESTIGATOR)

Ramg
(FINANCE OFFICER)

Savitakherkar
Prof. Savita Kerkar
(MENTOR) 5/2/2021

Shobhugus
Registrar, Goa University
(HEAD OF THE INSTITUTE)

UTILIZATION CERTIFICATE

(For the financial year ending from April 2020 to November 2020)

(Rs. in lakhs)

1. Title of the project/scheme: **Development of Ultrasensitive luminescent paper biosensor for quantification of cadmium and arsenic heavy metal contamination in drinking water and sea food**

2. Name of the Organization: **Goa University**

3. Principal Investigator: **Dr. Manisha Tiwari**

4. Dept. of Biotechnology's Sanction order No. & date of sanctioning the project : **No-BT/PR31861/BIC/101/1222/2019**

5. Amount brought forward from the previous financial year quoting DBT letter No. & date in which the authority to carry forward the said amount was given : **0**

6. Amount received from DBT during the financial year (Please give No. and dates of sanction orders showing the amounts paid) : **Rs.16,27,453.00**

7. Other receipts/interest earned, if any, on the DBT grants: **Rs. 14,906.00**

8. Total amount that was available for expenditure during the financial year (Sl. nos. 5, 6 and 7): **Rs. 10,94,888.00**

(From the total sanctioned grant was 16,27,453.00 for the tenure November 2019 -November 2020, Rs. 5,47,471.00 was utilized during Nov.2019-March 2020 and 10,94,888.00 was left (Including interest earned on Nov.2019-March 2020 period). A separate UC enclosed for the period Nov. 2019-March 2020.

9. Actual expenditure (excluding commitments) incurred during the financial year (statement of expenditure is enclosed) : **Rs. 9,64,242.00**

10. Unspent balance refunded, if any (Please give details of cheque No. etc.) ; **Nil**

11. Balance amount available at the end of the financial year : **Rs. 1,30,646.00**

12. Amount allowed to be carried forward to the next financial year vide letter No. & date : **NA**

1. Certified that the amount of **Rs 9,64,242.00** mentioned against col. 9 has been utilised on the project / scheme for the purpose for which it was sanctioned and that the balance of **Rs. 1,30,646.00** remaining unutilized at the end of the year has been surrendered to Govt. (Vide No. **NA** dated) / will be adjusted towards the grants-in-aid payable during the next year.

2. Certified that I have satisfied myself that the conditions on which the grants-in-aid was sanctioned have been duly fulfilled / are being fulfilled and that I have exercised the following checks to see that the money was actually utilised for the purpose for which it was sanctioned.

Kinds of checks exercised:

- 1.
- 2.
- 3.
- 4.
- 5.

Manisha Tiwari
5/02/2021
Dr. Manisha Tiwari
(PROJECT INVESTIGATOR)

Ram...
(FINANCE OFFICER)

Savitakherkar
5/2/21
Prof. Savita Kerkar
(MENTOR)

Registrar, Goa University
(HEAD OF THE INSTITUTE)
(To be Countersigned by the DBT Officer-in-charge)

Summary

| | |
|---|-----------------------|
| Grant received from DBT (From Nov. 2019- Nov. 2020)- | 16,27,453.00 |
| Interest earned from (Nov. 2019-March 2020) | - 14,906.00 |
| Total grant including interest | - 16,42,359.00 |
| Expenditure (From Nov. 2019-March 2020) | - 5,47,471.00 |
| Expenditure (From April 2020 - Nov. 2020) | - 9,64,242.00 |
| Remaining balance | 12-2-21 - 1,30,646.00 |

Manisha Tiwari
5/2/2021
Dr. Manisha Tiwari
(PROJECT INVESTIGATOR)

Savita Kerkar
5/2/2021
Prof. Savita Kerkar
(MENTOR)

Ram...
(FINANCE OFFICER)

Shodugnis
Registrar, Goa University
(HEAD OF THE INSTITUTE)

Appendix-C

**Statement of Expenditure referred to in para 9 of the
Utilization Certificate**

Showing grants received from the Department of Biotechnology and the expenditure
incurred during the period from April 2020 to November 2020 (Rs. in lakhs)

12-2-2021

| Item | Unspent balance Carried for ward from previous year | Grants* received from DBT during the year | Other receipts/ interest earned - if any, on the DBT grants | Total Col. (2+3+4) | Expenditure (excluding) commitmen ts) incurred during the year | Balance (5-6) | Remarks |
|--|---|--|--|--------------------------|--|--------------------|---|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. Non -Recurring | | | | | | | |
| (i) Equipment | 0 | 1,08,253.00 | | 1,08,253.00 | 1,04,071.00 | | Interest (From April 2020- Novemb er 2020) will be given at the end of financial year on total fund. |
| 2. Recurring | | | | | | | |
| (i) Human Resource | 0 | 8,59,200.00 | | 8,59,200.00 | 5,60,000.00 | | |
| (ii) Consumables | 0 | 5,00,000.00 | | 5,00,000.00 | 2,54,918.00 | | |
| (iii) Travel | 0 | 50,000.00 | | 50,000.00 | 0 | | |
| (iv) Contingency | 0 | 50,000.00 | | 50,000.00 | 45,253.00 | | |
| (v) Overheads | 0 | 60,000.00 | | 60,000.00 | | | |
| (if applicable) | 0 | | | | | | |
| (vi) Interest | | | 14,906.00** | 14,906.00** | | | |
| (vii) Expenditure (From Nov.2019- March 2020)* | | | | | 5,47,471.00* | | |
| Total (Rs.) | 0 | 16,27,453.00* | 14,906.00 | 16,42,359.00 | 15,11,713.00 | 1,30,646.00 | |

*This amount (16,27,453.00) was sanctioned for the period November 2019 – November 2020.

**Interest was added, which is shown in From Nov.2019-March 2020 utilization certificate.

*Expenditure (5,47,471.00) from Nov.2019 – March 2020 was shown in column 6.

Manisha Tiwari
5/2/2021
Dr. Manisha Tiwari
(PROJECT INVESTIGATOR)

Savitakerkar
5/2/2021
Prof. Savita Kerkar
(MENTOR)

Ramji
(FINANCE OFFICER)

Shodugris
Registrar, Goa University
(HEAD OF THE INSTITUTE)

Details of Manpower engaged

| S. No. | Name & Designation of the Manpower engaged | Educational Qualifications as per the DST guidelines | Pay Scale provided | Date of Appointment | Salary Due | Salary disbursed | Difference, if any | Date of leaving, if any |
|--------|--|--|------------------------------|---------------------|------------|---|--------------------|-------------------------|
| 1. | Project Assistant | Person with Master degree/B. Tech degree in biological science/ Biochemical engineering/Life science will be hired with consolidated salary | Rs.20,000.00 (Consolidated) | 17/02/2020 | | Rs.1,60,000.00 (From 1/04/2020-30/11/2020) | | |
| 2. | Principle Investigator | Ph.D | Rs. 50,000.00 (Consolidated) | 25/11/2019 | | Rs. 4,00,000.00 (From 1/04/2020-30/11/2020) | | |
| | Total | | | | | Rs.5,60,000.00 | | |

Manisha Tiwari
Dr. Manisha Tiwari
(Project Investigator)
(Sign and stamp)

Ramita
(Finance Officer)
(Sign and stamp)

Shodhan
(Head of the Institute)
(Sign and stamp)

Santabheran
Prof. Savita Kerker 5/2/2021
Mentor
(Sign and Stamp)

Dr. Savita Kerker
Professor
Department of Biotechnology
Govt. College
Telangana Pradesh Uda.