

No. BT/PR36154/NNT/28/2020
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi- 110 003
Dated:29.12.2021

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 Automated Low-Cost Reader for Soil NPK Detection using Printed Electrode with Integrated Android Application**" for a period of 3 Year 0 Month at a total cost of Rs. **3584360** (Rupees Thirty Five Lakhs Eighty Four Thousand Three Hundred and Sixty Only) on the terms and conditions detailed here under:-

2 The Project :

2.1 Title Development of Automated Low-Cost Reader for Soil NPK Detection using Printed Electrode : with Integrated Android Application

2.2 Details of the Investigators:

Principal Investigators:

Dr. Tharini Chandrapragasam

Professor and Head, Department of Electronics and Communication, B.S.Abdur Rahman University, Seethakathi Estate, G.S.T. Road, Vandalur, Chennai, Chengalpattu, Tamilnadu, 600048

CO-PI:

Dr. Abhay Sachdev

Scientist C, Department of Ubiquitous Analytical Technical Division, Central Scientific Instruments Organisation, CSIR-CSIO, Chandigarh, Chandigarh - 160030, Chandigarh (UT)

Dr. Manikandan Esakkimuthu

AP(Senior Grade), School of Electronics Engineering, Vellore Institute of Science & Technology, Chennai, B.S.Abdur Rahman University, Seethakathi Estate, Vandalur, Chengalpattu - 600048, Tamilnadu

Mentor:

Dr. Manikandan Esakkimuthu, AP(Senior Grade), School of Electronics Engineering, Vellore Institute of Science & Technology, Chennai B.S.Abdur Rahman University, Seethakathi Estate, Vandalur, Chengalpattu - 600048, Tamilnadu

2.3 Objectives:

1. To design and develop an Ion-Selective membrane(nano-composite based) for sensing soil macronutrients
2. To fabricate Ion-Selective Electrode (ISE) using screen printing technique.
3. To develop the readout integrated circuit(ROIC) to convert soil analyte into numerical input
4. To design a case using 3D printer to hold the membrane(nano-composite based) and ISE
5. To integrate ISE and ROIC with microcontroller/mobile phone for providing fertilizer recommendations
6. To study the usability and adoptability of the developed device for in-field soil contents analysis.

2.4 Time Schedule:

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

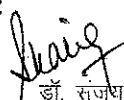
2.5 Objective wise Activities & Timelines:

Activities	Start month	End month	Deliverables
डॉ. संजय कलिमा / Dr. Sanjay Kalima वैज्ञानिक 'ई' / Scientist 'E' भारतीय प्रौद्योगिकी संस्थान / Instt. of Biotechnology विज्ञान और प्रौद्योगिकी, भारत सरकार, नई दिल्ली / Dept. of Science & Tech. भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi			

<p>Objective 1: To design and develop an Ion-Selective membrane(nano-composite based) for sensing soil macronutrients</p> <ul style="list-style-type: none"> > Literature Survey and interaction with the farmers – Sensor selection > Design and synthesis of nanoparticle based sensor design for NPK <p>Objective2:To fabricate Ion-Selective Electrode (ISE) using screen printing technique</p> <ul style="list-style-type: none"> > Numerical valuation of the proposed microfluidic design analysis using FEA tools > Electrode and sensor fabrication (RE and WE preparation) > Synthesis of ion selective membrane > Physical characterization and Electrochemical testing <p>Objective 3:To develop the readout integrated circuit(ROIC) to convert soil analyte into numerical input</p> <ul style="list-style-type: none"> > Soil sampling and testing 7 Readout integrated circuit design(ROIC) – Numerical analysis > Fabrication of ROIC using PCB > Software programming and Interfacing with microcontroller <p>Objective 4: To design a case using 3D printer to hold the membrane(nano-composite based) and ISE</p> <ul style="list-style-type: none"> > Case design using 3D printing <p>Objective5: To integrate ISE and ROIC with microcontroller/mobile phone for providing fertilizer</p> <ul style="list-style-type: none"> > Integration of ROIC with sensor and testing for soil nutrients > Preparation of Project report 	1	3	Advancements in Ion selective electrodes will be studied and literature gap identified
	4	12	Nanoparticle based sensor results for performance of N,P,K Journal Paper, Conference Publications
	13	18	Simulation results of proposed Design
	18	24	Fabricated Electrodes Conference/Journal Publications
	24	28	Electromical test results Amplifier/Interfacing Circuit
	18	36	PCB design and development APP development and Hardware design Implementation and Validation results Conference/Journal Publication Final report submission

2.6 Project Cost:

The total cost of the project is Rs. 3584360/- (Rupees Thirty Five Lakhs Eighty Four Thousand Three Hundred and Sixty Only) as per details given below:


 डॉ. सजय कालिया / Dr. Sanjay Kalia
 केन्द्रीय प्रौद्योगिकी विद्यापीठ
 बायोटेक्नोलॉजी विभाग, प्रौद्योगिकी विद्यापीठ, कानपुर
 विज्ञान, अभियांत्रिकी, कृषि, पशु चिकित्सा & Tech.
 भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

Institute wise details are:

Budget Head	Year I	Year II	Year III	Total(Rs.)
I. B.S.Abdur Rahman University,Chennai				
Equipment	1042000.00			1042000.00
Manpower	609120.00	609120.00	609120.00	1827360.00
Overhead	50000.00	40000.00	40000.00	130000.00
Travel	25000.00	25000.00	25000.00	75000.00
Consumables	160000.00	160000.00	90000.00	410000.00
Contingency	40000.00	30000.00	30000.00	100000.00
Total (Rs.)	1926120.00	864120.00	794120.00	3584360.00

2.7 Equipment

The details of the equipment sanctioned for the implementation of the project at **Annexure-I**

2.8 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

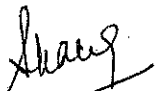
4. Terms & Conditions:

- A. The approval of the project is subject to condition that further release will be made only after appraisal and approval of the DBT umbrella scheme on 'Biotechnology Research & Development' by the Ministry of Finance for continuation during 15th Finance Commission.
- B. In case the whole or a part of the amount of the Grants-in-Aid is being refunded, an interest rate of ten percent thereon shall be recovered.
- C. The Expenditure is to be made as per the EAT module of the Government of India.
- D. Any further grant release in the project would also be subject to Utilization Certificate updates in PFMS.
- E. Quarterly deliverables in the project, in quantifiable terms have to be provided for each quarter of the project, based on which, inter-alia, monitoring/review of the project will be done and proposal for release of subsequent installment will be considered

Dr. S. S. Srinivasan
 वैज्ञानिक / Scientist
 विज्ञान और प्रौद्योगिकी विभाग / Deptt. of Biotechnology
 विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.
 भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

- 1.2 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
- 1.3 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 Kosh portal(www.bharatkosh.gov.in) as per GFR-2017-230(8) after finalization of the account for a given Financial Year.
5. No International Travel will be undertaken from the sanctioned project grant unless specified otherwise.
5. The Registrar, B.S.Abdur Rahman University, Chennai, Chennai, Tamilnadu 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.
3. 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 (I) "The PIs/Implementing Agencies shall strictly adhere to the GoI instructions issued vide OM No.F.4.1.2021-PPD dated 30.6.2021 in the matter of issue of Global tender Enquiry with special reference to instructions contained under para 4 of the said OM for procurement of equipments, spares and consumables for research purposes and shall not issue Global Tenders Enquiries before seeking the approval of the competent authority".
- (II) "After incurring the expenditure on import of such items and at the time of submission of UCs to the department next year, the PIs will also furnish the copy of the approval sought from the competent authority for issue of the GTE for such items of import. The release of next installment of grant will be subject to the fulfillment of the above condition."
11. This issues under the powers delegated to Divisional Head vide IFD order No. G-17012/1/2020-IFD-DBT dated 29.12.2020. This has been noted in IFD at SAN No. 102/IFD/SAN/1936/2021-2022 dated 08.12.2021.
12. This sanction order has been noted at serial no. 54 in the Register of Grants.

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


(Dr. Sanjay Kalia)

Scientist 'E'

डॉ. संजय कालिया / Dr. Sanjay Kalia
वैज्ञानिक 'E' / Scientist 'E'
बायोटेक्नोलॉजी विभाग / Department of Biotechnology
विज्ञान और प्रौद्योगिकी विभाग / Department of 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 Dr. Tharini Chandrapragasam(Project Co-ordinator), Seethakathi Estate, Vandalur-600048, Chennai, Tamilnadu
- 3 The Registrar, B.S.Abdur Rahman University,Chennai, Seethakathi Estate, G.S.T. Road, Vandalur, Chennai - 600048, Tamilnadu
- 4 Dr. Abhay Sachdev, Scientist C, Department of Ubiquitous Analytical Technical, (CSIR-CSIO) Central Scientific Instruments Organisation, Chandigarh - 160030
- 5 Dr. Manikandan Esakkimuthu, AP(Senior Grade), School of Electronics Engineering, Vellore Institute of Science & Technology, B.S.Abdur Rahman University, Seethakathi Estate, Vandalur, Chennai, Chengalpattu - 600048, Tamilnadu
- 6 Dr. Tharini Chandrapragasam, Professor and Head, Department of Electronics and Communication, B.S.Abdur Rahman University, Seethakathi Estate, G.S.T. Road, Vandalur, Chennai, Chengalpattu - 600048, Tamilnadu
- 7 Cash Section, DBT (2 copies).
- 8 Sanction Folder.
- 9 File Copy.




(Dr. Sanjay Kalia)
Scientist 'E'

डॉ. संजय कालिया / Dr. Sanjay Kalia
वैज्ञानिक / Scientist
बायोटेक्नोलॉजी विभाग / Biotechnology
विज्ञान और प्रौद्योगिकी विभाग / 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 "**Development of Automated Low-Cost Reader for Soil NPK Detection using Printed Electrode with Integrated Android Application**":

B.S.Abdur Rahman University, Chennai			
SNo.	Name of Equipment	No.	Cost(Rs.)
1.	3D printer	1	119000.00
2.	Screen printer	1	470000.00
3.	COMSOL Multiphysics software	1	403000.00
4.	Nvidia Board & Components	1	50000.00
Total			1042000.00


(Dr. Sanjay Kalia)
Scientist 'E'

डॉ. संजय कालिया / Dr. Sanjay Kalia
वैज्ञानिक 'E' / Scientist 'E'
बायोटेक्नोलॉजी विभाग / Dept. of Biotechnology
विज्ञान और प्रौद्योगिकी विभाग / 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 "Development of Automated Low-Cost Reader for Soil NPK Detection using Printed Electrode with Integrated Android Application":

Head	No. of Position	Year I	Year II	Year III	Total (Rs.)
1. B.S.Abdur Rahman University, Chennai					
Research Associate @ 47,000/- + 8% HRA for 1st, 2 nd year and 3rd year	1	609120	609120	609120	1827360
Total(Rs.)		609120	609120	609120	1827360

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-05/2019 dated 10.07.2020.



(Dr. Sanjay Kalia)

Scientist 'E'

डॉ. संजय कालिया / Dr. Sanjay Kalia

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

No. BT/PR36154/NNT/28/2020
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, (6-8th Floors)
CGO Complex, Lodhi Road,
New Delhi- 110 003
Date:29.12.2021

RELEASE ORDER

In continuation of this Department's sanction order of even number dated 29.12.2021 sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rule, 1978, for the release of Rs. **1042000.00** (Rupees Ten Lakhs Fourty Two Thousand Only) being the first year release for the project entitled "**Development of Automated Low-Cost Reader for Soil NPK Detection using Printed Electrode with Integrated Android Application**", being implemented by:

Darpan ID:-TN/2017/0159676

Dr. Tharini Chandrapragasam, Professor and Head, Electronics and Communication, B.S.Abdur Rahman University, Chennai, Chengalpattu - 600048, Tamilnadu

The detailed break-up is as given below:

SN	Institute Name	Non Recurring		Total Release Amount (Rs)
		Equipment	Other	
1	B.S.Abdur Rahman University, Chennai	1042000.00	0.00	1042000.00

2. The amount of Rs. **1042000.00** /-(**Rupees Ten Lakhs Fourty Two Thousand Only**) will be directly credited by the Pay & Accounts Officer, DBT in the account as detailed below:

The Registrar, B.S.Abdur Rahman University, Chennai, Tamilnadu

Bank Name : Indian Overseas Bank
Branch Name : Vandalur Branch
A/c No. : 165701000023831
IFSC Code : IOBA0001657
MICR Code : 600020102

3. The 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

4. The Registrar, B.S.Abdur Rahman University, Chennai, Tamilnadu will submit audited utilization certificates and statements of expenditure in respect of the above-mentioned amount.
5. As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organisations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provisions of C.A. (DPC) Act, 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organisation is called upon to do so.

Shree

वैज्ञानिक / Scientist
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology
विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

6. No International Travel will be undertaken from the sanctioned project grant unless specified otherwise.
7. The Institute/Agency will keep the whole of the grant in a Bank Account earning interest, and the interest so earned should be reported to DBT in the Utilisation Certificate and Statement of Expenditure. The interest earned should be remitted to the Consolidated fund of India through Bharat Kosh portal(www.bharatkosh.gov.in) as per GFR-2017-230(8) after finalization of the account for a given Financial Year.
8. **A.** The approval of the project is subject to condition that further release will be made only after appraisal and approval of the DBT umbrella scheme on 'Biotechnology Research & Development' by the Ministry of Finance for continuation during 15th Finance Commission.
B. The equipment sanctioned under the project should be purchased within **18 months** from the date of release of the grant.
C. The Expenditure is to be made as per the EAT module of the Government of India.
D. Any further grant release in the project would also be subject to Utilization Certificate updates in PFMS.
F. In case the whole or part of the amount of the Grants for Creation of Capital Assets is being refunded, an interest rate of ten percent thereon shall be recovered. The other terms and conditions governing the financial sanction will remain unaltered..
9. This issues under the powers delegated to Divisional Head vide IFD order No. G-17012/1/2020-IFD-DBT dated 29.12.2020. This has been noted in IFD at SAN No. 102/IFD/SAN/1938/2021-2022 dated 08.12.2021.
10. This sanction order has been noted at serial no. 55 in the Register of Grants.

Sanjay

(Dr. Sanjay Kalia)
Scientist 'E'

डॉ. संजय कालिया / Dr. Sanjay Kalia
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

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 Dr. Tharini Chandrapragasam(Project Co-ordinator, Vandalur-600048, Chennai, Tamilnadu
- 3 The Registrar, B.S.Abdur Rahman University, Chennai - 600048, Tamilnadu
- 4 Dr. Abhay Sachdev, Scientist C, Department of Ubiquitous Analytical Technical, (CSIR-CSIO) Central Scientific Instruments Organisation, Chandigarh - 160030
- 5 Dr. Manikandan Esakkimuthu, AP(Senior Grade), School of Electronics Engineering, Vellore Institute of Science & Technology, B.S.Abdur Rahman University, Chennai, Chengalpattu - 600048, Tamilnadu
- 6 Dr. Tharini Chandrapragasam, Professor and Head, Department of Electronics and Communication, B.S.Abdur Rahman University, Chennai, Chengalpattu - 600048, Tamilnadu
- 7 Cash Section, DBT (2 copies).
- 8 Sanction Folder.
- 9 File Copy.

Sanjay

(Dr. Sanjay Kalia)
Scientist 'E'

डॉ. संजय कालिया / Dr. Sanjay Kalia
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

No. BT/PR36154/NNT/28/2020
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, (6-8th Floors)
CGO Complex, Lodhi Road,
New Delhi- 110 003
Date:29.12.2021

RELEASE ORDER

In continuation of this Department's sanction order of even number dated 29.12.2021 sanction of the President is hereby accorded, under Rule18 of the Delegation of Financial Powers Rule, 1978, for the release of Rs. **884120.00** (Rupees Eight Lakhs Eighty Four Thousand One Hundred and Twenty Only) being the first year release for the project entitled "**Development of Automated Low-Cost Reader for Soil NPK Detection using Printed Electrode with Integrated Android Application**", being implemented by:

Darpan ID:-TN/2017/0159676

Dr. Tharini Chandrapragasam, Professor and Head, Department of Electronics and Communication, B.S.Abdur Rahman University, Chennai, Chengalpattu - 600048, Tamilnadu

The detailed break-up is as given below:

SN	Institute Name	Recurring						Total Release Amount (Rs)
		Manpower	Consumable	Travel	Contingency	Others	Overhead	
1	B.S.Abdur Rahman University, Chennai	609120.00	160000.00	25000.00	40000.00	0.00	50000.00	884120.00

2. The amount of Rs. **884120.00** /-(Rupees Eight Lakhs Eighty Four Thousand One Hundred and Twenty Only) will be directly credited by the Pay & Accounts Officer, DBT in the account as detailed below:

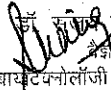
The Registrar, B.S.Abdur Rahman University, Chennai, Tamilnadu

Bank Name : Indian Overseas Bank
Branch Name : Vandalur Branch
A/c No. : 165701000023831
IFSC Code : IOBA0001657
MICR Code : 600020102

3. The 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. The Registrar, B.S.Abdur Rahman University, Chennai, Tamilnadu will submit audited utilization certificates and statements of expenditure in respect of the above-mentioned amount.


डॉ. संजय कालिया / Dr. Sanjay Kalia
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

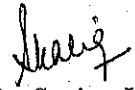
5. As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organisations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provision of CAG(DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organisation is called upon to do so.
6. No International Travel will be undertaken from the sanctioned project grant unless specified otherwise.
7. The Institute/Agency will keep the whole of the grant in a Bank Account earning interest, and the interest so earned should be reported to DBT in the Utilisation Certificate and Statement of Expenditure. The interest earned should be remitted to the Consolidated fund of India through Bharat Kosh portal(www.bharatkosh.gov.in) as per GFR-2017-230(8) after finalization of the account for a given Financial Year.
8. A. The approval of the project is subject to condition that further release will be made only after appraisal and approval of the DBT umbrella scheme on 'Biotechnology Research & Development' by the Ministry of Finance for continuation during 15th Finance Commission.
B. In case the whole or a part of the amount of the Grants-in-Aid is being refunded, an interest rate of ten percent thereon shall be recovered.
C. The Expenditure is to be made as per the EAT module of the Government of India.
D. Any further grant release in the project would also be subject to Utilization Certificate updates in PFMS.
E. Quarterly deliverables in the project, in quantifiable terms have to be provided for each quarter of the project, based on which, inter-alia, monitoring/review of the project will be done and proposal for release of subsequent installment will be considered. The other terms and conditions governing the financial sanction will remain unaltered.
9. This issues under the powers delegated to Divisional Head vide IFD order No. G-17012/1/2020-IFD-DBT dated 29.12.2020. This has been noted in IFD at SAN No. 102/IFD/SAN/1937/2021-2022 dated 08.12.2021.
10. This sanction order has been noted at serial no. 56 in the Register of Grants.

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 Dr. Tharini Chandrapragasam(Project Co-ordinator), Vandalur-600048, Chennai, Tamilnadu
- 3 The Registrar, B.S.Abdur Rahman University, Vandalur, Chennai - 600048, Tamilnadu
- 4 Dr. Abhay Sachdev, Scientist C, Department of Ubiquitous Analytical Technical, (CSIR-CSIO) Central Scientific Instruments Organisation, Chandigarh - 160030
- 5 Dr. Manikandan Esakkimuthu, AP(Senior Grade), School of Electronics Engineering, Vellore Institute of Science & Technology, B.S.Abdur Rahman University, Chennai, Chengalpattu - 600048, Tamilnadu
- 6 Dr. Tharini Chandrapragasam, Professor and Head, Department of Electronics and Communication, B.S.Abdur Rahman University, Chennai, Chengalpattu - 600048, Tamilnadu
- 7 Cash Section, DBT (2 copies).
- 8 Sanction Folder.
- 9 File Copy.


(Dr. Sanjay Kalia)

डॉ. संजय कलिया / Scientist 'E' Sanjay Kalia
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


(Dr. Sanjay Kalia)

डॉ. संजय कलिया / Scientist 'E' Sanjay Kalia
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

PROCEEDINGS OF THE ADDITIONAL DIRECTOR(FAC)
Entrepreneurship Development and Innovation Institute -Chennai.
Present:Dr.E.Bhaskaran

Rc.No:2270/EDII/JD/2018

Date:04/10/2021

Sub EDII – I&I – Innovation Voucher Programme – Releasing of first Installment amount of Rs.1,00,000/- (50% of IVP contribution) of the total sanction amount of Rs.2 lakhs - to **Crescent Innovation and Incubation Council** which is Knowledge Partner of **M/s Vasthak Pvt Ltd.** under Voucher A programme-Sanction Order issued– Reg.

Ref 1. Minutes of the Steering Committee meeting held on 18.08.2021.
 2. Tripartite Agreement received from **M/s Vasthak Pvt Ltd.**
 3. Guidelines issued.

ORDER :

As per the reference, 1st cited above, **M/s Vasthak Pvt Ltd** and Knowledge partner was selected by the Steering Committee under the Innovation Voucher Programme A.

Based on the above, a Tripartite Agreement was received from **M/s Vasthak Pvt Ltd** and Knowledge Partner - Crescent Innovation and Incubation Council as per 2nd reference cited.

The sanctioned details are as below :

Applicants	Knowledge Partner	Voucher	Total Project Cost	Total amount sanctioned by EDII	Applicant Contribution	1st Insallt. 50%
M/s Vasthak Pvt Ltd	Crescent Innovation and Incubation Council	A	4,90,000	2,00,000	2,90,000	1,00,000

As per the 3rd reference cited above, the grant released to Knowledge Partner who will be responsible to monitor the Innovation activity proposed by the applicant. The grant is not transferable and any escalation cost will have to be met by the applicant and the validity period of the grant will be 12 completed months from

the date of release of 1st installment.

In this connection, sanction is hereby accorded for an amount of **Rs.1,00,000/- (Rupees One lakh only)** as a First Installment as against the sanctioned amount of Rs.2 lakh towards grant for Innovation Voucher Programme to Crescent Innovation and Incubation Council which is the Knowledge Partner of **M/s Vasthak Pvt Ltd.**

Hence, the Accounts Officer is authorized to draw and disburse an amount of **Rs.1,00,000/- (Rupees One lakh only)** as First Installment as against the sanctioned amount of Rs.2 lakh towards grant for Innovation Voucher Programme to **Crescent Innovation and Incubation Council** which is the Knowledge Partner of **M/s Vasthak Pvt Ltd.** The amount may be disbursed through NEFT transaction to the account enclosed herewith.

The Knowledge Partner is requested to keep this amount in a separate account in a bank to enable proper accounting.

The above expenditure may be debitible under the Head of account **“Innovation Voucher Programme”**.

**Additional
Director (fac)**

To,
The Accounts Officer
EDII, Chennai.

Copy to :

- 1. Crescent Innovation and Incubation Council**
- 2. M/s Vasthak Pvt Ltd.**

FILE NO. TAR/2021/000070
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: 21-Dec-2021

ORDER

Subject: Financial Sanction under Teachers Associateship for Research Excellence (TARE) to **Dr. Surya Rajan B, B.S. Abdur Rahman Institute Of Science And Technology , Nh 45, Seethakathi Estate, Vandalur, Chennai, Tamil Nadu-600048**- under the mentorship of **Dr. D. Lenin Singaravelu**, at **National Institute of Technology Tiruchirappalli Tanjore Main Road, National Highway 67, near BHEL - 620015**- Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned grant at a total cost of **Rs. 18,30,000/- (Rs. Rupees Eighteen Lakh Thirty Thousand only)** for a duration of 36 months.

The date of start of the project will be 07 December, 2021. The items of expenditure for which the total allocation of **Rs. 18,30,000/-** has been approved are given below:

The following budget is proposed for

B.S. Abdur Rahman Institute Of Science And Technology , Nh 45, Seethakathi Estate, Vandalur, Chennai, Tamil Nadu-600048 (Parent)

Sl. No.	Budget Head	Amount
1.	Fellowship	Rs. 0 (@0/- per month (consolidated))
2.	Research Grant	Rs. 2,50,000/- per annum
3.	Overheads	Rs. 25,000/- per annum

National Institute of Technology Tiruchirappalli Tanjore Main Road, National Highway 67, near BHEL - 620015 (Host)

Sl. No.	Budget Head	Amount
1.	Fellowship	Rs. 60,000 (on completion of 90 days mandatory attendance in the host institute every year)
2.	Research Grant	Rs. 2,50,000/- per annum
3.	Overheads	Rs. 25,000/- per annum

2. Sanction of the **SERB** is also accorded to the payment of **Rs. 2,75,000/- (Rupees Two Lakh Seventy Five Thousand only)** to **B.S. Abdur Rahman Institute Of Science And Technology, NH 45, Seethakathi Estate, Vandalur , Rs. 3,35,000/- (Rupees Three Lakh Thirty Five Thousand only)** to **National Institute of Technology Tiruchirappalli Tanjore Main Road, National Highway 67, near BHEL - 620015** being the first installment of the grant for the year 2021-2022 for implementation of the said research project.

3. The expenditure involved is debitable to

Fund for Science & Engineering Research (FSER)

This release is being made under Teachers Associateship For Research Excellence (TARE). (Mechanical & Manufacturing Engineering & Robotics)

4. The Sanction has been issued to with the approval of the competent authority vide Diary No. **SERB/F/5621/2021-2022** dated **21 December, 2021**

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

6. 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.

7. 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.

8. The release amount of **Rs. 2,75,000/- (Rupees Two Lakh Seventy Five Thousand 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:

B.S. Abdur Rahman Institute of Science and Technology , Nh 45, seethakathi estate, vandalur, Chennai, Tamil nadu-600048 (Parent) :

PFMS Unique Code	BSAUNIV
Account Name	B.S.A. CRESCENT INSTITUTE OF SCIENCE AND TECHNOLOGY
Account Number	165701000023831
Bank Name & Branch	Indian Overseas Bank Seethakathi Estate, GST Road, Vandalur, Chennai - 600048
IFSC/RTGS Code	IOBA0001657
Email address of PI	suryarajan.b@gmail.com
Email id of A/C Holder	registrar@crestent.education
Email address of concerned officer	ms_tare@serbonline.in

The release amount of **Rs. 3,35,000/-** (Rupees Three Lakh Thirty Five Thousand 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:

National Institute of Technology Tiruchirappalli Tanjore Main Road, National Highway 67, near BHEL - 620015 (Host) :

PFMS Unique Code	NIT19
Account Name	NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI (SERB)
Account Number	39350593762
Bank Name & Branch	State Bank of India NIT Campus, Post Bag No: 3, National Institute of Technology, Tiruchirappalli - 620015
IFSC/RTGS Code	SBIN0001617
Email address of PI	suryarajan.b@gmail.com
Email id of A/C Holder	deanrc@nitt.edu
Email id of Mentor	Dr. D. Lenin Singaravelu

9. Both the institutes will furnish Utilization certificate (UCs) financial year wise to the SERB and an audited statement of accounts pertaining to the grant immediately after the end of each financial year.

10. The institute will maintain separate audited accounts for the fellowship. 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. The File no. **TAR/2021/000070** may also be mentioned in all research communications arising from the above project with due acknowledgement of **SERB**.

12. As this is the first grant for the fellowship, no previous U/C is required.

13. 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.

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.


(Dr. T Thangaradjou)
Scientist F
msls@serb.gov.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.	(i) Dr. Surya Rajan B MECHANICAL ENGINEERING B.S. Abdur Rahman Institute of Science and Technology, Nh 45, seethakathi estate, vandalur, Chennai, Tamil nadu-600048 Email: suryarajan.b@gmail.com Mobile: 919994332570 (ii) Dr. D. Lenin Singaravelu National Institute of Technology Tiruchirappalli Tanjore Main Road, National Highway 67, near BHEL - 620015 (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit www.serb.gov.in .)
5.	(i) REGISTRAR, B.S. Abdur Rahman Institute Of Science And Technology, NH 45, Seethakathi Estate, Vandalur (ii) Dean (Research National Institute of Technology Tiruchirappalli Tanjore Main Road, National Highway 67, near BHEL - 620015 (Receipt of Grant may be intimated by name to the undersigned)


(Dr. T Thangaradjou)
Scientist F
msls@serb.gov.in

No.SR/WOS-A/LS-706/2016 (G)
Government of India
Ministry of Science & Technology
Department of Science & Technology
(WISE-KIRAN DIVISION)

Technology Bhawan
New Mehrauli Road
New Delhi-110016
Dated-20.12.2021

ORDER

Sub: Financial approval of the project under Women Scientist Scheme A (WOS-A) entitled "**Role of naturally occurring small molecular in transthyretin-induced familial amyloid cardiomyopathy**".

PI: Dr. Sheeza Khan, B.S. Abdur Rahman Crescent Institute of Sciences and Technology, Vandalure, Chennai-600048, TN.

Sanction of the President is hereby accorded to the approval of the above mentioned project at a total cost of **Rs 6,74,950/-** (Rupees Six Lakh Seventy Four Thousand Nine Hundred Fifty only) for a duration of 2 Years. The detailed breakup of the grant for General (**Rs. 6,74,950/-**).

Sl. No.	Heads	1 Year	2 Year	Total
A.	Non-Recurring (Capital Items)			
	Equipments:	-----		-----
B.	Recurring(General)			
	Fellowship	-----		-----
	Consumables	2,50,336/-	2,50,336/-	5,00,672/-
	Contingencies	26,607/-	26,606/-	53,213/-
	Travel	35,533/-	35,532/-	71,065/-
C.	Overhead	25,000/-	25,000/-	50,000/-
D.	Total of Recurring Grant (B+C)	3,37,476/-	3,37,474/-	6,74,950/-
E.	GRAND TOTAL (A+D)	3,37,476/-	3,37,474/-	6,74,950/-

2. Sanction of the grant is subject to the conditions as detailed in website www.online-wosa.gov.in
3. The sanction of the President is also accorded to the release of **Rs 3,37,476/-** (Rupees Three Lakh Thirty Seven Thousand Four Hundred Seventy Six only) under "General Component" The Registrar, **B.S. Abdur Rahman Crescent Institute of Sciences and Technology, Vandalure, Chennai-600048, TN** being the first installment of the grant for the year 2021-2022 for implementation of the above mentioned project.
4. This sanction is subject to the condition that the grantee organization will furnish to the Department of Science & technology, financial year wise Utilization Certificate (UC) in the proforma prescribed as per GFR 2017 and audited statement of expenditure (SE) along with up to date progress report at the end of each financial year duly reflecting the interest earned / accrued on the grants received under the project. This is also subject to the condition of submission of the final statement of expenditure, utilization certificate and project completion report within one year from the scheduled date of completion of the project.
5. The grantee organization will have to enter & upload the Utilization Certificate in the PFMS portal besides sending it in physical form to this Division. The subsequent/final instalment will be released only after confirmation of the acceptance of the UC by the Division and entry of previous Utilization Certificate in the PFMS.
6. If the grant has been released under capital head through separate sanction order under the same project for purchase of equipment(s), separate SE/UC has to be furnished for the released Capital head grant.

Contd../2

7. The grant-in-aid being released is subject to the condition that.

(a) A transparent procurement procedure in line with the Provisions of General Financial Rules 2017 will be followed by the Institute/ Organization under the appropriate rules of the grantee organization while procuring capital assets sanctioned for the above mentioned project and a certificate to this effect will be submitted by the Grantee organization immediately on receipt of the grant.

(b) While submitting Utilization Certificate/Statement of Expenditure, the organization has to ensure submission of supporting documentary evidences with regard to purchase of equipment/capital assets as per the provisions of GFR 2017. Subsequent release of grant under the project shall be considered only on receipt of the said documents.

8. The Grantee Institute (GI) will maintain separate audited as per GFR 2017 Rule 230 (8) account for the project and the entire amount of grant will be kept in an interest bearing bank account. For Grants released during F/Y 2021-2022 and onwards interest and other earnings, against released Grant shall be remitted to Consolidated Fund of India, (**through Non-Tax Receipt Portal (NTRP), i.e. www.bharatkosh.gov.in**), immediately after finalization of accounts, as it shall not be adjusted towards future release of Grant. A certificate to this effect shall have to be submitted along with statement of expenditure/utilization certificate for considering subsequent release of grant/closure of project accounts. GI should also follow Rule 230 (17) of GFR 2017 concerning to reservation of SC/ST/OBC, if applicable.

9. DST reserves sole rights on the assets created out of grants. Assets acquired wholly or substantially out of government grants (except those declared as obsolete and unserviceable or condemned in accordance with the procedure laid down in GFR 2017), shall not be disposed of without obtaining the prior approval of DST.

10. The Principal Investigator under Women Scientist Scheme is not permitted to withdraw any emoluments/ salary/fellowship from any other project either supported by DST or by any other funding agency.

11. The account of the grantee organization shall be open to inspection by the sanctioning authority and audit (both by C& AG of India and Internal Audit by the Principal Accounts Office of the DST), whenever the organization is called upon to do so, as laid down under Rule 236(1) of General Financial Rules 2017.

12. Due acknowledgement of technical support / financial assistance resulting from this project grant should mandatorily be highlighted by the grantee organization in bold letters in all publications / media releases as well as in the opening paragraphs of their Annual Reports during and after the completion of the project.

13. Failure to comply with the terms and conditions of the Bond will entail full refund with interest in terms of Rule 231 (2) of GFR 2017.

14. The expenditure involved is debit to Demand No.88, Department of Science & Technology for the year 2021-22:

3425 Other Scientific Research (Major Head)
60 Others (Sub-Major Head)
60.200 Assistance to other Scientific Bodies (Minor Head)
68 Science and Technology Institutional and Human Capacity Building (Sub Head)
01 Disha Programme for Women in Science
68.01.31 **Grants-in-aid General for the year 2021-2022 (Voted)**


(Previous: Disha Programme for Women in Science 3425.60.200.55.01.31)

15. The amount **Rs 3,37,476/-** (Rupees Three Lakh Thirty Seven Thousand Four Hundred Seventy Six only) will be drawn by the Drawing and Disbursing Officer, DST and will be disbursed The **Registrar, B.S. Abdur Rahman Crescent Institute of Sciences and Technology, Vandalure, Chennai-600048, TN.** The bank details for electronic transfer of funds through RTGS are given below:-

Institute name : B.S. Abdur Rahman Crescent Institute of Sciences and Technology
Bank Name : Indian Overseas Bank
Account Number : 165701000020175
Branch : Vandalur
IFSC code : IOBA0001657



16. Goods (consumables/equipment) available in GeM portal are to be procured mandatorily online through GeM and PI will also follow DoE's guidelines for incurring expenditure under the different sub-head.
17. As per Rule 234 of GFR 2017, this sanction has been entered at S. No 565 in the register of grants maintained in the **WISE-KIRAN Division** for scheme (WOS-A).
18. This issues with the concurrence of IFD Vide their Concurrence Dy.No)/3620/2021-22 dated-17.12.2021.
19. The project continuation beyond 31.03.2021 will be subject to appraisal and approval of the continuation of the Scheme under which these projects are funded as approved by DoE vide their OM No.42(02)/PF-II/2014, dated 06.08.2020.
20. The Grantee Institution is advised to start using EAT module and next release will be made only after mapping and following EAT modules by the grantee institution.


(Vandana Singh)
Scientist-E

Copy for information and necessary action to:-

1. The Director of Audit (CW & M-II), AGCR Building, IP Estate, New Delhi-110 002.
2. Copy with two spare copies of the sanction to the Drawing & Disbursing Officer, DST, Cash Section
3. The Registrar, B.S. Abdur Rahman Crescent Institute of Sciences and Technology, Vandalure, Chennai-600048, TN.
4. Dr. Sheeza Khan, B.S. Abdur Rahman Crescent Institute of Sciences and Technology, Vandalure, Chennai-600048, TN.
5. Pay & Accounts Officer, DST, New Delhi.
6. IFD, DST, New Delhi.
7. Sanction Folder.


(Vandana Singh)
Scientist-E

SCIENCE & ENGINEERING RESEARCH BOARD (SERB)
(Statutory Body Established Through an Act of Parliament : SERB Act 2008)

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

Approval Letter

File Number: SPG/2021/004642

Dated: 13-Apr-2022

Subject: Project titled "SYNTHESIS OF C-ARYL SEPTANOSIDES AS ANALOGUES OF C-ARYL GLYCOSIDIC INHIBITORS".

Dear Dr. Bhagavathy Shanmugasundaram,

The project cited above has been recommended by the related **SERB-POWER Grant** to the Science and Engineering Research Board (SERB) for funding. The following are the items recommended for a period of 3 years. The final budget to be sanctioned would be based on quotations received, existing norms, funds availability etc.

The committee recommended the following budget

Manpower :

-> Project Assistant - 1

Equipment Details : Rs. 850000

-> Rotary Evaporator - 1

-> Water chiller (-30 deg C) - 1

-> High vacuum pump - 1

-> HPLC accessories - 1

Consumables : Rs. 400000

Travel Cost : As proposed

Contingencies : As proposed

Overhead : As per norms

The total budget will not exceed 30 Lakhs for three years at any cost.

You are requested to upload the Quotations of the approved equipment within one week from the date of this letter.

Kindly follow the below steps only then you will be able to acknowledge the approval letter :

1. Go to www.serbonline.in through your credentials
2. Go to Menu --> Proposal submission --> View submitted proposals
3. Click on the link under Status column "Proposal Approved, Acknowledgment pending from PI"

You are requested to upload the following documents of the approved budget within one week from the date of this letter.

1. Lowest quotation for equipment/s (including freight, insurance, customs charges etc., if any) - within the committee recommended budget under non-recurring head. (Kind note: the submitted/uploaded quotation should be within the SERB approved budget).
2. Salary structure for the project staff (including HRA, Medical Benefits, if applicable etc.), including HRA certificate on the letter head of competent authority or OM related.
- 3 Detailed justification for consumables with cost details- **mandatory- very important**- please send it in word document or PDF document through compose mail -ADD File-option from our SERB portal system. (**Note: if consumable cost is more than Rs.5 lakhs**).
4. Ethical clearance certificate-(Kind note: Title of the project should match with the ethical clearance document and also it should be valid at the time of submission) **Mandatory-very important**- attach the files through compose mail -ADD file- option from our SERB portal system.
5. Upload RTGS details of the implementing institute as per the updated template available under download drop down menu at SERB online portal. **As the directions of GOI the account should be registered in the PFMS portal and Mapped accordingly for facilitating the transfer of funds. While MAPPING KINDLY ENSURE that scheme and the funding agency both are selected as SERB. (Please make sure that all the details entered in the SERB online portal match with the uploaded RTGS document)- Very Important**
6. A certificate stating that any visit abroad for a period more than eight weeks would be undertaken after due permission from SERB, may also be submitted

Note:

(i). If mandatory documents (ethical clearance, RTGS) are not in order the file will not be processed for sanction. The investigators have to take the whole responsibility towards submission of above documents. No hard copies will be entertained.

(ii). If the project does not require documents such as ethical clearance (animal/human), IBSC, Stem cell related clearance kindly confirm with a self-certification saying that it does not involve any animal/human studies or genetic modification in any organisms or bio safety issues or with appropriate clearances endorsed by the head of the institute.- **Mandatory**

(Kindly note that during the issue of sanction order or during the implementation of this project, if SERB come across/found that the project work involves/requires animal/human studies or genetic modification in any organisms or bio safety issues, stem cell related work, SERB will terminate the project without any notice and PI will be debarred from the SERB funding)

SERB has adopted the Scientific Social Responsibility (SSR) Policy which mandates SERB Grantees to undertake some SSR activities during their project period. You are requested to read the SSR guidelines available under SSR menu and choose the activities according to your preference. Depending on the activity chosen, additional budget would be provided under separate head to carry out the chosen activities. Please note that choosing the SSR activities is mandatory for issue of financial sanction subject to submission and acceptance of other necessary documents

Dr. Bhagavathy Shanmugasundaram
Chemistry
B.S. Abdur Rahman Institute Of Science And Technology , Nh 45, Seethakathi Estate, Vandalur, Chennai, Tamil Nadu-600048

Yours sincerely,
(Dr. Monika Agarwal)
Scientist F
Email: monika@serb.gov.in

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj,
New Delhi-110070

RPS - Sanction Letter

File No. 8-87/FDC/RPS/POLICY-1/2021-22

**The Drawing and Disbursing Officer**

All India Council for Technical Education
Nelson Mandela Marg,
Vasant Kunj, New Delhi-110070,

Sub: Release of a sum of Rs. 759207/- being the 1st installment of the total grant of Rs. 867666/- for conduct of Project under Research Promotion Scheme (RPS) during the financial year 2021-22.

Sir,

With reference to the proposal submitted by the institute, this is to convey the sanction of the Council for payment of Rs. 759207/- (Rupees Seven Lakh Fifty Nine Thousand Two Hundred Seven Only) as 1st installment out of a total approved grant-in-aid of Rs.867666/- for conduct of a Project under the Research Promotion Scheme (RPS), as per details given below:-

I.	Name and address of the Beneficiary Institution (University / College / Institution)	: Registrar / Director / Principal, B S A CRESCENT INSTITUTE OF SCIENCE AND TECHNOLOGY, GST ROAD VANDALUR CHENNAI - 600048, TAMIL NADU
II.	Principal Investigator's Name & Dept./Course	: Dr. SIDDHI JAILANI (CAD/CAM)
III.	Co-Principal Investigator's Name & Dept.	: JAINULLABUDDIN MAHASHAR ALI (MECHANICAL ENGINEERING)
IV.	Grant-in-aid Sanctioned	: Rs. 867666/- (Rs. 650749/- for non-recurring and Rs.216917/- for recurring expenditure)
V.	Amount to be Released during the year 2021-22 (as 1 st installment)	: Rs. 759207/- (Rs. 650749/- Full amount of non-recurring & Rs. 108458/- recurring i.e. 50 % of total sanctioned recurring grant)
VI.	Project Duration	: 3 Years
VII.	Title of the Project	: Non-contact Surface roughness measurement of Machined Surfaces using the Wavelet Metrics of Laser Speckle Images

I. Release of funds:

- The amount of the grant shall be drawn by the Drawing and Disbursing Officer (DDO), All India Council for Technical Education, New Delhi on the Grants-in-aid bill and shall be disbursed to and credited to the account of B S A CRESCENT INSTITUTE OF SCIENCE AND TECHNOLOGY, GST ROAD VANDALUR CHENNAI - 600048, TAMIL NADU through PFMS.
- The sanctioned grant-in-aid is debit to the Major Head "601.12.a (RPS Plan)" Gen. and is valid for payment during the financial year 2021-22.
- The sanction issues in exercise of the powers delegated to the Council. It is also certified that grant-in-aid is being released in conformity with the rules and principles of the Scheme.
- The grant-in-aid is being released in conformity with the Terms & Conditions as well as norms of the scheme as already communicated and also being communicated in this letter.

II. Maintenance of account by the Institute/PI:

- Funds covered by this grant shall be kept separately and would not be mixed up with other funds so as to know the amount of interest accrued on the grant.
- The grant is intended to cover items of expenditure/equipment approved by AICTE.
- Acknowledgement of receipt of grant and letter of acceptance of terms and conditions is to be submitted to AICTE within 15 days from the receipt of the grant to the following address:

Director (Faculty Development Cell), AICTE, Nelson Mandela Marg, Vasant Kunj, New Delhi-110070

4. The accounts of the grantee will be opened for test check by the Council or Comptroller & Auditor General of India or by any officer designated by them.
5. The Principal and PI of the institute are requested to verify the correctness of the undermentioned bank account/RTGS/PFMS details submitted by them alongwith the Proposal, in which the grant is being released. In case of any omission, the same should be reported to AICTE immediately along with refund of entire grant: -

Institute Pan No.	Bank Name	Bank Branch	Bank Branch Add.	Account Holder Name	Account Type	Account Number	IFSC Code
AABTB50 26G	INDIAN OVERSEAS BANK	Vandalur	G.S.T. Road, Vandalur, Chennai 600048	B.S.A Crescent Institute of Science & Technology	Saving Account	165701000023831	IOBA0001657

6. The grantee Institution shall observe all financial norms and guidelines as prescribed by the AICTE/Government of India from time to time. Grantee institution must follow GFR guidelines in procuring the sanctioned items and maintain an audited record of assets acquired wholly or substantially out of the grant-in-aid and a register for assets shall be maintained by the Institute in the prescribed form i.e. GFR-19.
7. **Interest accrued on the sanctioned grant-in-aid will be reported and refunded to AICTE and not adjusted against the subsequent installment.**

III. General Instructions:

1. It should be ensured that no RPS project in favour of the same P.I. has been sanctioned during the last 03 years before utilizing this amount and the matter be brought to the notice of this Council immediately in case a faculty is sanctioned multiple RPS Projects.
2. The duration of Project is 03 years and the **date of release of the grant by AICTE shall be taken as the date of commencement of the project.** The Registrar/Director/Principal shall intimate about the receipt of the grant to AICTE. Any Expenditure, incurred prior to issuance of this Sanction Order, would not allowed to be adjusted in the grant and if the University/Institution do not take-up the project work **within 6 months** of the receipt of the grant, approval shall *ipso facto* lapse and the Institute has to necessarily refund the entire grant to AICTE along with interest within a month. In case the grant is not refunded within said duration 18% interest will be levied on it. The grant has to be refunded to AICTE, through RTGS as per details given below:

Account Number	55113199952
Name of the Account Holder	Member Secretary, AICTE, New Delhi
Bank Name	State Bank of India
Branch Name	Shashtri Bhawan, New Delhi
IFSC Code	SBIN0050203

3. The Institute may constitute a Project Monitoring Committee (PMC). The composition of the PMC shall be as under:
 - i. Principal/Director of the institution (Chairperson)
 - ii. Two HODs from institute (Members)
 - iii. In case of private institute one subject expert from government institute, not below the rank of Associate Professor (Member)
 - iv. Coordinator of the project (Member Secretary)
4. The grant shall be utilized strictly for the purpose as specified in the sanction letter. Re-appropriation of funds from one Head to another is strictly not permitted viz. Recurring and non-recurring Heads. Further, the equipment(s)/item(s) purchased should be as per the specifications and individual item-wise costs sanctioned by AICTE, and not taking the total grant sanctioned as one entity. Item-wise purchase cost shall be matched with the sanctioned cost, and the cost of item purchased below the sanction cost shall be restricted as actual cost. If the item purchase cost is higher than its sanctioned cost, the cost shall be restricted to the sanctioned cost and the additional amount shall be met by the Institute from its own resources.
5. Similarly, the recurring grant can be used for the items (non-recurring) sanctioned by the AICTE. No money be used for going abroad to attend Conference / seminars. However, for presenting a Paper in a Seminar / Conference **within the country**, the travel expenses may be met from the recurring grant.

:: 3 ::

6. No request for additional grant over and above the sanctioned grant shall be considered by the AICTE. The additional amount, if any, expended beyond the sanctioned grant shall be met by the Institute from its own resources.
7. The institute/University shall not charge any overheads on this Project and will provide all the administrative support **and timely release of grant to PI** for completion of the Project.
8. The grantee shall utilize grants only on approved items as per list of equipment attached. However, if the grantee wishes to recast the Project, approval of Council must be obtained for the revised item of expenditure and they will maintain proper accounts of the expenditure as per the norms/procedures of AICTE/Government of India. **The revised proposal should be within the total grant sanctioned and duly supported with reasons and recommendations of the Project Monitoring Committee (PMC).**
9. The assets acquired wholly or substantially out of All India Council for Technical Education's grant shall not be disposed or encumbered or utilized for the purpose other than those for which the Grant was given without proper sanction of the All India Council for Technical Education.
10. Each project sanctioned by AICTE is assigned a specific Reference Number, which is given on pre-page. All correspondence address to AICTE regarding the project must quote this number alongwith year of sanction of the project, otherwise correspondence may not be entertained.
11. The grantee shall follow the terms and conditions of Research Promotion Scheme (RPS) as laid down by the Council from time to time.

IV. Submission of documents by the institute/PI to AICTE:

A. Documents to be submitted within one month of completion of each financial year:

- i. Annual Progress Report, indicating therein the number of patents, publications or any other achievement.
- ii. Utilization Certificate, Audited Utilization Certificate, Receipt & Payments, Statement of Expenditure.
- iii. Audited record of assets acquired wholly or substantially out of the grant-in-aid and a register for assets in the prescribed form i.e. GFR-19.
- iv. Separate Bills/vouchers related to Non-recurring and recurring expenditures duly signed & stamped by the PI & Head of the institution.
- v. Stock entry register duly verified by the Store-in-charge and PI & counter signed by Head of institution.

B. Documents to be submitted within two month of completion of the Project:

- i. The consolidated Utilization Certificate (UC) and Receipt & Payment Account for the Project duration, duly audited.
- ii. Consolidated audited statement of expenditure, to the effect that the grant has been utilized for the purpose for which it has been sanctioned. It should contain the head-wise break up of expenditure made from the grant-in-aid provided by the Council.
- iii. Project Completion Report duly signed & stamped by the PI & Head of the institution and Project Evaluation Committee (PEC) Members.
- iv. Principal Investigator/institute to submit the Feed Back Form in AICTE format.
- v. The prescribed formats for submission of necessary mandatory documents and Terms & Conditions may please be downloaded from www.aicte-india.org/schemes/research-innovations-development-schemes.

Note: Any deviation from the above said time schedule will cause serious action against the institute.

Contd.....4/-

V. Approved List of Items under Non-recurring grant:

S. No.	Approved Items (As per proposal)	No. of Units	Amount recommended (in Rs.)
A.	Non-recurring		
i)	Right Angle bracket	1	
ii)	XYZ axis table	2	Rs. 650749/-
B.	Recurring i.e. 50% of total approved recurring grant) for Contingencies & Consumables only		Rs. 108458/-
	Grand Total (A) + (B)		Rs. 759207/-

Copy forwarded for information and necessary action to:

1. REGISTRAR / DIRECTOR / PRINCIPAL,

B S A CRESCENT INSTITUTE OF SCIENCE AND
TECHNOLOGY,
GST ROAD VANDALUR CHENNAI - 600048,
TAMIL NADU

2. NAME OF PRINCIPAL INVESTIGATOR,

Dr. SIDDHI JAILANI,
(CAD/CAM)
B S A CRESCENT INSTITUTE OF SCIENCE AND TECHNOLOGY,
GST ROAD VANDALUR CHENNAI - 600048,
TAMIL NADU

3. OFFICE OF DIRECTOR GENERAL OF AUDIT
GENERAL REVENUES, AGCR BUILDING
I.P. ESTATE, NEW DELHI-110002.

4. GUARD FILE

(Col. B. Venkat)
Director (FDC)

TAMIL NADU FOREST DEPARTMENT

From,

Thiru Debasis Jana, IFS,
Chief Conservator of Forests
(Research) (FAC),
State Forest Research Institute,
Kolapakkam, Chennai 600127

To,

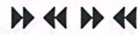
The Director, IFGTB, Coimbatore;
The Dean, FCRI, TNAU, Mettupalayam;
The Dean, School of Life Sciences,
B.S. Abdur Rahman Crescent Institute of
Science & Technology, Vandalur;
The Principal, St. Joseph's College of
Engineering, Old Mamallapuram Road,
Chennai;
The Principal, Alpha Arts & Science
College, Chennai
The Biozone Research Technologies Pvt.
Ltd., Chennai;
The Principal,
Bharath Institute of Higher Education
and Research, Chennai

Ref. No. 1149/2020/P; dated, 04.03.2022

Sir/ Madam,

Sub: Forests Research – Collaborative Research with various
Institutions/Organizations/Colleges – During 2021-22 – Topics
approved – Regarding

Ref: 1. Research Advisory Committee Meeting held on 21.04.2021
2. G.O. (D) No.41 Environment, Climate Change and Forests
(FR 7) Department dated, 28.02.2022



I wish to inform that based on the discussion and evaluation of the Collaborative Research project proposals for 2021-22 in the 21st Chapter of Research Advisory Committee (RAC) meeting held on 21.04.2021 through video teleconference, the RAC approved the following research proposals for the year 2021-22.

1. Isolation of plant alkaloids and development of plant based wild animal repellent to mitigate human wild boar conflicts in Tamil Nadu - Dr. K. Baranidharan, Ph.D., Assistant Professor (Forestry), Dept. of Forest Products and Wildlife, TNAU, Mettupalayam {through DCF (Genetics), Coimbatore}

2. Development of herbal health care products from medicinal and aromatic plants traditionally practised by Irular tribal Traditional knowledge in Tamil Nadu Dr. K. Panneer Selvam, Ph.D., Scientist – D, IFGTB, Coimbatore (through DCF (Genetics), Coimbatore)
3. Nano formulation to enhance growth, metabolites production and disease protection for sustainable cultivation of medicinal plants - Dr. S. Hemalatha, Professor and Dean, School of Life Sciences, B.S. Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai
4. Polyherbal infused chitosan films for seed storage Dr. S. Justin Packia Jacob, Professor, Department of Biotechnology, St. Joseph's College of Engineering, Old Mamallapuram Road, Chennai (through DCF, SFRI, Kolapakkam, Chennai)
5. Biodegradable Nanopolymer composite from Forest Biowaste for increasing water / moisture retention in soil for sustainable forests - Dr. G. Selvamangai, Associate Professor & Head, Biotechnology, Alpha Arts & Science College, Chennai & Mr. D. Shanmugha Sundhar, Scientific Officer, Biozone Research Technologies Pvt. Ltd. (through DCF, SFRI, Kolapakkam, Chennai)
6. Development of interactive wound dressing (hydrogel, cream, patches) infused with phytomolecule extracted from plants and endophytes - Dr. Florida Tilton Ph.D. Biozone Research Technologies Pvt. Ltd., Chennai (through DCF, SFRI, Kolapakkam, Chennai)
7. Proposals Phytotherapeutic management of inflammation and viral manifestation towards Covid 19 Treatments Dr. Vidhya Rekha U, Reader, Dept. of Public Health Dentistry, Bharath Institute of Higher Education and Research, Chennai (through DCF, SFRI, Kolapakkam, Chennai)

In this connection, I would like to inform that the above collaborative research proposals have been approved by Government vide reference 2nd cited. I request you to instruct the concerned Principal Investigators or faculty to consult with the concerned Deputy Conservator of Forests to fine-tune the role and responsibilities of TNFD and Institutions/ Colleges/ Organization for conducting collaborative research and also request to execute the agreement in bond paper along with Terms of Reference for the projects for taking further action. I shall be grateful if this exercise is completed in the next 5 days and agreement executed with the department latest by 11th March 2022.

Yours' faithfully

Sd/ Debasis Jana

Chief Conservator of Forests (Research) (FAC)

Chennai 600127

Copy to the

1. Deputy Conservator of Forests (Genetics), Coimbatore
2. Deputy Conservator of Forests, State Forest Research Institute, Kolapakkam

The Unit Officers are requested to discuss with the concerned Principal Investigators and fine-tune the role and responsibilities of TNFD and Institutions/ Colleges/Organizations under Collaborative research and make agreement in bond paper along with Terms of Reference and to initiate the work immediately.

Sd/ Debasis Jana

Chief Conservator of Forests (Research) (FAC)

Chennai 600127

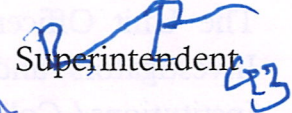
Copy submitted to the

Principal Chief Conservator of Forests (Research & Education) Chennai 600127 for kind information

Copy to the

1. Dr. K. Baranidharan, Ph.D., Assistant Professor (Forestry),
Dept. of Forest Products and Wildlife, TNAU, Mettupalayam
2. Dr. K. Panneer Selvam, Ph.D., Scientist – D, IFGTB, Coimbatore
3. Dr. S. Hemalatha, Professor and Dean, School of Life Sciences,
B.S. Abdur Rahman Crescent Institute of Science and Technology,
Vandalur, Chennai
4. Dr. S. Justin Packia Jacob, Professor, Department of Biotechnology,
St. Joseph's College of Engineering, Old Mamallapuram Road,
Chennai
5. Dr. G. Selvamangai, Associate Professor & Head, Biotechnology,
Alpha Arts & Science College, Chennai
6. Dr. Florida Tilton Ph.D. Biozone Research Technologies Pvt. Ltd.,
Chennai
7. Dr. Vidhya Rekha U, Reader, Dept. of Public Health Dentistry,
Bharath Institute of Higher Education and Research, Chennai

// True copy // By order //


Superintendent

21/4/22
4/3/22