

**No. BT/PR42900/MED/122/305/2021**  
GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE & TECHNOLOGY  
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors  
CGO Complex, Lodhi Road,  
New Delhi- 110 003  
Dated:08.05.2023

**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 "**Application of Machine Learning methods to predict mortality and morbidity in Spontaneous Intracerebral Hemorrhage**" for a period of 2 Year 0 Month at a total cost of Rs. **1867520/-** (Rupees Eighteen Lakhs Sixty Seven Thousand Five Hundred and Twenty Only) on the terms and conditions detailed here under:-

**2. The Project :**

**2.1 Title :** **Application of Machine Learning methods to predict mortality and morbidity in Spontaneous Intracerebral Hemorrhage**

**2.2 Details of the Investigators:**

**Dr. Girish Menon**

**Principal Investigator**

Kasturba Medical College, Manipal  
Karnataka, 576104

**CO-PI:**

**Dr. Ajay Hegde**

Kasturba Medical College, Manipal  
Karnataka, 576104

**Dr. Hareesha K**

Kasturba Medical College, Manipal  
Karnataka, 576104

**Dr. Siddharth Srinivasan**

Kasturba Medical College, Manipal  
Karnataka, 576104

**2.3 Objectives:**

1. Train Machine learning (ML) algorithms using in house data of intracranial hemorrhage patients and use it to make predictions
2. Compare ML models to logistic regression models.
3. Create a web based platform where any clinician could prognosticate outcome of their patient using our data set.

**2.4 Time Schedule:**

The duration of the project is 2 Year 0 Month from the date of First Release.

**2.5 Project Cost:**

The total cost of the project is Rs. **18,67,520/-** (Rupees Eighteen Lakhs Sixty Seven Thousand Five Hundred and Twenty Only) as per details given below:

*Amit*  
Dr. AMIT KUMAR YADAV  
Scientist 'C'  
Department of Biotechnology  
Govt. of India  
C.G.O. Complex, Lodhi Road  
New Delhi-110003

Budget Head	Items	Year I	Year II	Total (Rs.)
GIA-General-Manpower	Manpower	593760.00	593760.00	11,87,520.00
GIA-General-Overhead	Overhead	50000.00	50000.00	1,00,000.00
GIA-General-Recurring	Travel	50000.00	50000.00	1,00,000.00
	Consumables	190000.00	190000.00	3,80,000.00
	Contingency	50000.00	50000.00	1,00,000.00
<b>Total (Rs.)</b>		<b>9,33,760.00</b>	<b>9,33,760.00</b>	<b>18,67,520.00</b>

### 2.6 Manpower:

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

### 2.7 Quarterly Deliverables:

The details are placed at **Annexure-III**

### 3. Head of Account:

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

Demand No. 90	Department of Biotechnology
<b>3425</b>	Other Scientific Research 2023-2024
<b>3425.60</b>	Others (Sub Major Head)
<b>3425.60.200</b>	Assistance to other Scientific Bodies
<b>3425.60.200.29</b>	Biotechnology Research and Development
<b>3425.60.200.29.17</b>	Assistance to Research and Development
<b>3425.60.200.29.17.31</b>	Grants-in Aid General

### 4. Terms & Conditions:

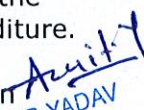
**4.1** The other terms and conditions governing this sanction are:

- 1) If any biological data as specified in the guidelines are being generated in the project then PI should submit the data generated in the project to Indian Biological Data Centre – The National Repository being implemented at Regional Centre for Biotechnology, Faridabad in compliance with the Biotech-PRIDE Guidelines 2021.
- 2) 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.
- 3) 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 instalment will be considered.

**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 Kosh portal([www.bharatkosh.gov.in](http://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.

  
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**6.** The Dean, Kasturba Medical College, Manipal, Manipal, Karnataka 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](http://www.nbaindia.org)

**10.** The interest earned should be remitted to the Consolidated fund of India through Bharat Kosh portal ([www.bharatkosh.gov.in](http://www.bharatkosh.gov.in)) as per GFR-2017-230(8) after finalization of the account for a given Financial Year.

**11.** Project extension will be considered only under exceptional circumstances by TEC/DBT Apex Board for a period of six months. Extension requests will not be considered if received after completion of the project.


**12.** "The PIs/Implementing Agencies shall strictly adhere to the GoI instructions issued vide OM

(I) 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 releases of next installment of grant will be subject to the fulfillment of the above condition."

**13.** This issues, under the power delegated to this Department and with the concurrence of IFD vide their SAN **No102/IFD/SAN/210/2023-2024** dated **May'4'2023**.

**14.** This sanction order has been noted at serial no. 01 in the Register of Grants.

  
(Dr. Amit Kumar Yadav)  
Scientist 'C'

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

Dr. AMIT KUMAR YADAV  
Scientist 'C'  
Department of Biotechnology  
Govt. of India  
C.G.O. Complex, Lodhi Road  
New Delhi-110003

**Copy to:**

1. The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi- 110 002.
2. Dr. Girish Menon, Kasturba Medical College, Manipal, Karnataka, 576104
3. Dr. Ajay Hegde, Kasturba Medical College, Manipal, Karnataka, 576104
4. Dr. Hareesha K S, Kasturba Medical College, Manipal, Karnataka, 576104
5. Dr. Siddharth Srinivasan, Registrar, Kasturba Medical College, Manipal, Karnataka, 576104

6. The Dean, Kasturba Medical College, Manipal, Karnataka, 576104
7. Cash Section, DBT (2 copies).
8. Sanction Folder.
9. File Copy.

*Amit*  
(Dr. Amit Kumar Yadav)

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**Annexure -II**

Details of the manpower sanctioned for the implementation of the project entitled "**Application of Machine Learning methods to predict mortality and morbidity in Spontaneous Intracerebral Hemorrhage**":

Head	No. of Position	Year I	Year II	Total (Rs.)
Data Entry Operator Data Entry Operator @ Rs.16,000/- p.m.	1	192000	192000	<b>384000</b>
Junior Research Fellow JRF @ Rs. 33,480/- p.m. (Rs.31000/- + 8% HRA) for 1st	1	401760	401760	<b>803520</b>
<b>Total(Rs.)</b>		<b>593760</b>	<b>593760</b>	<b>1187520</b>

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

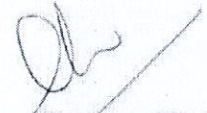
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**Annexure-III**

Name of the Activity to be accomplished	First Year				Second Year				Third Year			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1. Data preparation	x											
2. Data preprocessing		x										
3. Feature Extraction			x									
4. Machine Learning model building				x	x							
5. Result validation						x						
6. Web Interface development							x					
7. Model Testing								x				

BD-DBT



**Signature of the PI**

**DR. GIRISH MENON**  
M.Ch (N. Surg), DNB (N. Surg)  
**PROFESSOR & HEAD**  
**DEPT. OF NEUROSURGERY**  
**KASTURBA HOSPITAL, MANIPAL - 576 104**  
KMC Reg. No. KRL199/0000139 KTK



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