

BT/TDS/121/SP20276/2016
Government of India
Ministry of Science & Technology
Department of Biotechnology

Block 2, 6-8 Floors,
CGO Complex, Lodi Road,
New Delhi-110003

Dated: 04.06.2018

ORDER

In continuation of this Department's sanction order of even number dated 04.06.2018, sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the release of a sum of **₹ 143.61 lakhs (Rupees One hundred Forty Three lakhs Sixty One thousand only)** jointly at University of Delhi South Campus (UDSC), New Delhi (₹ 49.29 lakhs), Jawaharlal Nehru University (JNU), New Delhi (₹ 25.12 lakhs), RV College of Engineering (RVCE), Bangalore (₹ 6.50 lakhs), University of Agricultural Sciences (UAS), Bangalore (₹ 46.06 lakhs) and CSIR-National Chemical Laboratory (NCL), Pune (₹ 16.64 lakhs) being the first release under Recurring heads for implementation of the project entitled "**Genetic Enhancement of Mulberry by Genomics Approaches: A multi-component Network Project**" as per breakup given below:

S. No.	Item	Amount (₹ in lakh)													Grand Total
		UDSC			JNU	RVCE	UAS				NCL				
		Sub-Pr. 1	Sub-Pr. 3(a)	Total	Sub-Pr. 1	Sub-Pr. 2(a)	Sub-Pr. 2(b)	Sub-Pr. 3(a)	Sub-Pr. 3(b)	Sub-Pr. 4(b)	Sub-Pr. 4(a)	Sub-Pr. 4(b)	Total		
Recurring:															
1.	Manpower	7.42	4.37	11.79	5.62	5.70	3.90	6.17	5.62	4.37	20.06	6.24	0.00	6.24	49.41
2.	Consumables	25.00	8.00	33.00	17.00	0.00	6.00	10.00	2.00	2.00	20.00	6.00	2.00	8.00	78.00
3.	Travel	1.00	0.50	1.50	0.50	0.50	0.50	0.50	0.50	0.50	2.00	0.30	0.50	0.80	5.30
4.	Contingencies	1.00	0.50	1.50	1.00	0.30	0.50	0.50	0.50	0.50	2.00	0.30	0.50	0.80	5.60
5.	Overheads	1.00	0.50	1.50	1.00	0.00	0.50	0.50	0.50	0.50	2.00	0.30	0.50	0.80	5.30
Total:		35.42	13.87	49.29	25.12	6.50	11.40	17.67	9.12	7.87	46.06	13.14	3.50	16.64	143.61

2. The other terms and conditions governing the financial sanction will remain unaltered.
3. The amount of ₹ 143.61 lakhs (Rupees One hundred Forty Three lakhs Sixty One thousand only) shall be directly credited by PAO to the bank account of the following:
 - a) An amount of ₹ 49.29 lakhs (Rupees Forty Nine lakhs Twenty Nine thousand only) shall be created to the bank account of **Director, UDSC, New Delhi** through RTGS as per the following details:

Name of the Bank: State Bank of India, UDSC Campus, New Delhi
Account No.: 10043546386
IFSC Code: SBIN008778
MICR Code: 110002175
 - b) An amount of ₹ 25.12 lakhs (Rupees Twenty Five lakhs Twelve thousand only) shall be created to the bank account of **the Finance Officer, JNU, New Delhi** through RTGS as per the following details:

Name of the Bank: State Bank of India, JNU New Campus Branch, New Delhi
Account No.: 10596550879
IFSC Code: SBIN0010441
MICR Code: 110002428

Mohd. Asha

BT/TDS/121/SP20276/2016
Government of India
Ministry of Science & Technology
Department of Biotechnology

Block 2, 6-8 Floors,
CGO Complex, Lodi Road,
New Delhi-110003

Dated: 04.06.2018

Non-Recurring Grant

ORDER

In continuation of this Department's sanction order of even number dated 04.06.2018, sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the release of a sum of ₹ 76.56 lakhs (Rupees Seventy Six lakhs Fifty Six thousand only) jointly at University of Delhi South Campus (UDSC), New Delhi (~~₹ 19.08 lakhs~~ [Sub-Project 1]), Jawaharlal Nehru University (JNU), New Delhi (₹ 40.48 lakhs [Sub-Project 1]), RV College of Engineering (RVCE), Bangalore (₹ 10.00 lakhs [Sub-Project 2(a)]) and University of Agricultural Sciences (UAS), Bangalore (₹ 7.00 lakhs [Sub-Project 2(b)]) being the first release under Nonrecurring head 'Equipment' for implementation of the project entitled "Genetic Enhancement of Mulberry by Genomics Approaches: A multi-component Network Project".

2. The other terms and conditions governing the financial sanction will remain unaltered.
3. The amount of ₹ 76.56 lakhs (Rupees Twenty Six lakhs Fifty Six thousand only) will be shall be directly credited by PAO to the bank account of the following:

- a) An amount of ~~₹ 19.08~~ lakhs (Rupees Nineteen lakhs Eight thousand only) shall be credited to the bank account of *the Director, UDSC, New Delhi* through RTGS as per the following details:

Name of the Bank: State Bank of India, UDSC Campus, New Delhi
Account No.: 10043546386
IFSC Code: SBIN008778
MICR Code: 110002175

- b) An amount of ₹ 40.48 lakhs (Rupees Forty lakhs Forty Eight thousand only) shall be credited to the bank account of *the Finance Officer, JNU, New Delhi* through RTGS as per the following details:

Name of the Bank: State Bank of India, JNU New Campus Branch, New Delhi
Account No.: 10596550879
IFSC Code: SBIN0010441
MICR Code: 110002428

- c) An amount of ₹ 10.00 lakhs (Rupees Ten lakhs only) shall be credited to the bank account of *the Principal, RVCE, Bangalore* through RTGS as per the following details:

Name of the Bank: Kotak Mahindra Bank, RVCE Branch, Bangalore
Account No.: 136010112055
IFSC Code: KKBK0008053
MICR Code: 560485068

- d) An amount of ₹ 7.00 lakhs (Rupees Seven lakhs only) shall be credited to the bank account of *the Comptroller, UAS, Bangalore* through RTGS as per the following details:

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FILE NO. JBR/2021/000027
SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

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

Dated: 10-Aug-2022

ORDER

Subject: Financial Sanction of the award J C Bose Fellowship Renewal to Prof. Paramjit Khurana, Department Of Plant Molecular Biology, University Of Delhi, South Campus, New Delhi, Delhi, DELHI-110021.

Sanction of Science and Engineering Research Board (SERB) is hereby accorded to the above mentioned fellowship at a total cost of Rs. 41,93,277/- (Rs. Rupees Forty One Lakh Ninety Three Thousand Two Hundred and Seventy Seven only) with break-up of Rs NIL. under Non-Recurring and Rs. 41,93,277/- under Recurring for a duration of 2 year(s) and 3 month(s). The items of expenditure for which the total allocation of Rs. 41,93,277/- has been approved for a period of 2 year(s) and 3 month(s) from the date of start or till 31 August, 2024 or upto the age of 68 years, whichever is earlier, are given below:

(Amount in Rs)

Year	Non-recurring	Recurring			Total
		Fellowship @Rs.25,000/- p.m.	Research Grant/year	Overhead Charges/year	
1	NIL	3,00,000	15,00,000	1,00,000	19,00,000
2	NIL	3,00,000	15,00,000	1,00,000	19,00,000
3	NIL	62,096	3,10,483	20,698	3,93,277
Total	NIL	6,62,096	33,10,483	2,20,698	41,93,277

2. Sanction of the SERB is also accorded to the payment of Rs. 15,82,600/- (Rupees Fifteen Lakh Eighty Two Thousand Six Hundred only) to University Of Delhi, South Campus, New Delhi, Delhi Grant-in-aid General under Recurring being the grant for the year 2022-2023 for implementation of the said fellowship.

3. The expenditure involved is debitable to Fund for Science & Engineering Research (FSER). This release is being made under JC Bose National Fellowship Renewal.

4. The Sanction has been issued with the approval of the competent authority vide Diary No. SERB/F/3772/2022-2023 dated 10 August, 2022.

5. Date of start of the fellowship is 01 June, 2022.

6. Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website (www.serb.gov.in) and as per J C Bose fellowship Guidelines.

7. 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 fellowship.

8. The total release amount of Rs. 15,82,600/- (Rupees Fifteen Lakh Eighty Two Thousand Six Hundred only) will be drawn by the Under Secretary of the SERB and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	UDSC75
Account Name	Research Project Office Accounts
Account Number	10043546386
Bank Name & Branch	State Bank of India South Campus University of Delhi University of Delhi South Campus New Delhi-110021 SBI.8778@SBI.CO.IN
IFSC/RTGS Code	SBIN0008778
Email address of PI	param@genomeindia.org
Email id of A/C Holder	dir_udsc@du.ac.in
Email address of concerned officer	dey.sukumar@serb.gov.in

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

10. The institute will furnish to the SERB, New Delhi, Utilization certificate and an audited statement of accounts pertaining to the grant immediately after the end of each financial year i.e. 31st March.

11. The research personnel sanctioned in the fellowship, if any is co-terminus with the duration of the fellowship and SERB will have no liability to meet the fellowship etc. beyond the duration of the fellowship.



भारतीय कृषि अनुसंधान परिषद
Indian Council of Agricultural Research
राष्ट्रीय कृषि विज्ञान कोष
National Agricultural Science fund (NASF)
भारतीय कृषि अनुसंधान भवन-1 पूसा नई दिल्ली- 110012
Krishi Anusandhan Bhavan-I, Pusa New Delhi-110012

F. No. NASF/ABP-7014/2018-19

Dated: 09.03.2021

To,
The Vice Chancellor,
University of Delhi,
Delhi-110007

Subject: Revised Sanction letter in view of the additional budget under the recurring head for the Research project entitled for the project entitled, “**Identification of super donors and alleles for spikelet fertility and low chalkiness under thermal stress in rice**” under the National Agricultural Science Fund (NASF)

Ref: Sanction conveyed through F. No. NASF/ABP-7012/2018-19 dated 13.10.2020

Sir,

The In partial modification of our sanction letter dated 13.10.2020 for the award of the above-cited project, I am enclosing the revised sanction as *Annexure I-III* in view of sanction of additional allocation of budget of ₹ 3.07258 lakhs as fresh sanction to **Delhi University, South Campus New Delhi** approved by the Empowered committee in its 42nd meeting held on 4th March, 2021 for the payment of arrears to contractual staff under recurring head during the financial year 2020-21. **This additional budget should be strictly spent within this financial year and it will not be revalidated or fresh sanctioned in next financial year in any case.** The revised budget of the project is now **356.21226 lakh** instead of the original amount **353.13968 lakh**. All other terms and conditions as communicated earlier remains the same.

Yours faithfully,

(Sanjeev Saxena)
ADG (NASF)

Copy for information and necessary action to:

- (i) Dr. Anil Grover, Professor, Department of Plant Molecular Biology, University of Delhi South Campus-110021
- (ii) DDF, NASF Secretariat
- (iii) Office copy

Year-wise and head-wise breakup in budget

S.No.	Lead Centre: University of Delhi South Campus, New Delhi	2018-19 (August, 2018 to March, 2019)	2019-20 (April, 2019 to March, 2020)	2020-21 (April, 2020 to March, 2021)	2021-22 (April, 2021 to July, 2021)	Total
I. NON RECURRING COST						
1						
Civil Works						
	a. Renovation of labs/experimental facilities including laboratory furniture like analysis bench, fume hood etc.)	0.00000	0.00000	0.00000	0.00000	0.00000
	b. New structures for experimental facilities and for special housing for new equipment	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
2.						
Goods & Equipment						
	a. Equipment, Plant & Machinery, Technology to be purchased	15.00000	0.00000	0.00000	0.00000	15.00000
	b. Animals:	0.00000	0.00000	0.00000	0.00000	0.00000
	c. Furniture & Fixtures	0.00000	0.00000	0.00000	0.00000	0.00000
	d. Computer hardware & software (costing more than Rs. 5000) related specifically to the project	3.00000	0.00000	0.00000	0.00000	3.00000
	e. Monographs, Manuals, databases (non-bibliographical) etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	f. Miscellaneous	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b+c+d+e+f)	18.00000	0.00000	0.00000	0.00000	18.00000
3.						
Capacity Building						
	a. Attending Workshops/Seminars/ Exposure Visits					
	i. Abroad	0.00000	0.00000	0.00000	0.00000	0.00000
	ii. India	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i+ii)	0.00000	0.00000	0.00000	0.00000	0.00000
	b. Organizing Training/workshop-cum-Training	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub Total (1+2+3)	18.00000	0.00000	0.00000	0.00000	18.00000

(₹ in lakh)

II. RECURRENING COSTS						
1. TA/DA	0.20000	0.35000	0.35000	0.10000	1.00000	
2. Review Workshop/Meetings	1.00000	1.00000	1.00000	0.00000	3.00000	
3. Contractual Staff	6.76000	13.21258	16.11938	4.41440	40.50636	
4. Operational Contingencies						
i. Laboratory purpose						
a. Chemicals, glassware, raw material, pots etc.	12.00000	18.00000	15.00000	0.00000	45.00000	
b. Unskilled/semi skilled labour	0.00000	0.00000	0.00000	0.00000	0.00000	
c. Outsourcing of lab work	0.00000	0.00000	0.00000	0.00000	0.00000	
d. Small maintenance & repairs of lab equipment	0.00000	0.00000	0.00000	0.00000	0.00000	
e. Computer stationery	0.00000	0.00000	0.00000	0.00000	0.00000	
ii. Field purpose						
a) Small field equipment (spade, khurpi etc.) pots, seed, etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
b) Semiskilled/unskilled labour	0.90000	2.00000	2.05000	0.45000	5.40000	
c) Feed and Medicine	0.00000	0.00000	0.00000	0.00000	0.00000	
d) Small repairs of farm machinery	0.00000	0.00000	0.00000	0.00000	0.00000	
iii. Vehicle hiring for surveys, arranging & attending meetings etc.	0.06000	0.10000	0.10000	0.04000	0.30000	
iv. Miscellaneous urgent purchases	0.00000	0.00000	0.00000	0.00000	0.00000	
v. Small animals: rabbit, mice etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
vi. Phone/ fax cost	0.00000	0.00000	0.00000	0.00000	0.00000	
Sub-Total (i+ii+iii+iv+v+vi)	12.96000	20.10000	17.15000	0.49000	50.70000	
Sub-Total (1+2+3+4)	20.92000	34.66258	34.61938	5.00440	95.20636	
III. Institutional Charges	2.09200	3.15900	2.89520	0.41260	8.55880	
TOTAL COST (I+II+III)	41.01200	37.82158	37.51458	5.41700	121.76516	

S.No.	Cooperating Centre: 1. IARI, New Delhi	2018-19 (August, 2018 to March, 2019)	2019-20 (April, 2019 to March,2020)	2020-21 (April, 2020 to March, 2021)	2021-22 (April, 2021 to July, 2021)	Total
1.	NON RECURRING COST					
1	Civil Works					
	a. Renovation of labs/experimental facilities including laboratory furniture like analysis bench, fume hood etc.)	0.00000	0.00000	0.00000	0.00000	0.00000
	b. New structures for experimental facilities and for special housing for new equipment	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
2.	Goods & Equipment					
	a. Equipment, Plant & Machinery, Technology to be purchased	12.00000	0.00000	0.00000	0.00000	12.00000
	b. Animals: fish	0.00000	0.00000	0.00000	0.00000	0.00000
	c. Furniture & Fixtures	0.00000	0.00000	0.00000	0.00000	0.00000
	d. Computer hardware & software (costing more than Rs. 5000) related specifically to the project	0.00000	0.00000	0.00000	0.00000	0.00000
	e. Monographs, Manuals, databases (non-bibliographical) etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	f. Miscellaneous	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b+c+d+e+f)	12.00000	0.00000	0.00000	0.00000	12.00000
3.	Capacity Building					
	a. Attending Workshops/Seminars/ Exposure Visits					
	i. <u>Abroad</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	ii. <u>India</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i+ii)	0.00000	0.00000	0.00000	0.00000	0.00000
	b. Organizing Training/workshop-cum- Training	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub Total (1+2+3)	12.00000	0.00000	0.00000	0.00000	12.00000

II. RECURRENING COSTS						
1. TA/DA	0.13000	0.30000	0.25000	0.07000	0.75000	
2. Review Workshop/Meetings	0.00000	0.00000	0.00000	0.00000	0.00000	
3. Contractual Staff	2.60000	5.12016	5.00960	1.73600	14.46576	
4. Operational Contingencies						
i. Laboratory purpose						
a. Chemicals, glassware, raw material, pots etc.	4.00000	2.00000	2.00000	0.00000	8.00000	
b. Unskilled/semi skilled labour	0.00000	0.00000	0.00000	0.00000	0.00000	
c. Outsourcing of lab work	0.00000	0.00000	0.00000	0.00000	0.00000	
d. Small maintenance & repairs of lab equipment	0.00000	0.00000	0.00000	0.00000	0.00000	
e. Computer stationery	0.00000	0.00000	0.00000	0.00000	0.00000	
ii. Field purpose						
a. Small field equipment (spade, khurpi etc.) pots, seed, etc.	0.50000	0.50000	0.00000	0.00000	1.00000	
b. Semiskilled/unskilled labour	2.67000	4.00000	3.10000	1.33000	11.10000	
c. Running cost of farm machinery diesel oil etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
d. Small repairs of farm machinery	0.00000	0.00000	0.00000	0.00000	0.00000	
iii. Vehicle hiring for surveys, arranging & attending meetings etc.						
iv. Miscellaneous urgent purchases	0.00000	0.00000	0.00000	0.00000	0.00000	
v. Small animals: rabbit, mice etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
vi. Phone/ fax cost	0.00000	0.00000	0.00000	0.00000	0.00000	
Sub-Total (i+ii+iii+iv+v+vi)	7.17000	6.50000	5.10000	1.33000	20.10000	
Sub-Total (1+2+3+4)	9.90000	11.92016	10.35960	3.13600	35.31576	
III. Institutional Charges	0.49500	0.53500	0.47810	0.14280	1.65090	
TOTAL COST (I+II+III)	22.39500	12.45516	10.83770	3.27880	48.96666	

<u>S.No.</u>	<u>Cooperating Centre: 2. IGKV, Raipur</u>	2018-19 (August, 2018 to March, 2019)	2019-20 (April, 2019 to March, 2020)	2020-21 (April, 2020 to March, 2021)	2021-22 (April, 2021 to July, 2021)	Total
IV.	NON RECURRING COST					
1	Civil Works					
	c. Renovation of labs/experimental facilities including laboratory furniture like analysis bench, fume hood etc.)	0.00000	0.00000	0.00000	0.00000	0.00000
	d. New structures for experimental facilities and for special housing for new equipment	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
2.	Goods & Equipment					
	g. Equipment, Plant & Machinery, Technology to be purchased	7.00000	7.00000	0.00000	0.00000	14.00000
	h. Animals: fish	0.00000	0.00000	0.00000	0.00000	0.00000
	i. Furniture & Fixtures	0.00000	0.00000	0.00000	0.00000	0.00000
	j. Computer hardware & software (costing more than Rs. 5000) related specifically to the project	0.00000	0.00000	0.00000	0.00000	0.00000
	k. Monographs, Manuals, databases (non-bibliographical) etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	l. Miscellaneous	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b+c+d+e+f)	7.00000	7.00000	0.00000	0.00000	14.00000
3.	Capacity Building					
	c. Attending Workshops/Seminars/ Exposure Visits					
	iii. <u>Abroad</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	iv. <u>India</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i+ii)	0.00000	0.00000	0.00000	0.00000	0.00000
	d. Organizing Training/workshop-cum-Training	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub Total (1+2+3)	7.00000	7.00000	0.00000	0.00000	14.00000
	V. RECURRENING COSTS					

5. TA/DA	0.23000	0.50000	0.40000	0.12000	1.25000
6. Review Workshop/Meetings	0.00000	0.00000	0.00000	0.00000	0.00000
7. Contractual Staff	2.40000	4.49839	4.68560	1.62400	13.20799
8. Operational Contingencies					
vii. Laboratory purpose					
f. Chemicals, glassware, raw material, pots etc.	2.00000	2.00000	2.00000	0.00000	6.00000
g. Unskilled/semi skilled labour	0.00000	0.00000	0.00000	0.00000	0.00000
h. Outsourcing of lab work	0.00000	0.00000	0.00000	0.00000	0.00000
i. Small maintenance & repairs of lab equipment (Repair of micromanipulator & accessories)	0.00000	0.00000	0.00000	0.00000	0.00000
j. Computer stationery	0.00000	0.00000	0.00000	0.00000	0.00000
viii. Field purpose					
e. Small field equipment (spade, khurpi etc.) pots, seed, etc.	0.25000	0.25000	0.25000	0.00000	0.75000
f. Semiskilled/unskilled labour	1.33000	2.00000	1.40000	0.67000	5.40000
g. Running cost of farm machinery diesel oil etc.	0.00000	0.00000	0.00000	0.00000	0.00000
h. Small repairs of farm machinery	0.00000	0.00000	0.00000	0.00000	0.00000
ix. Vehicle hiring for surveys, arranging & attending meetings etc.	0.00000	0.00000	0.00000	0.00000	0.00000
x. Miscellaneous urgent purchases	0.00000	0.00000	0.00000	0.00000	0.00000
xi. Small animals: rabbit, mice etc.	0.00000	0.00000	0.00000	0.00000	0.00000
xii. Phone/ fax cost	0.00000	0.00000	0.00000	0.00000	0.00000
Sub-Total (i+ii+iii+iv+v+vi)	3.58000	4.25000	3.65000	0.67000	12.15000
Sub-Total (1+2+3+4)	6.21000	9.24839	8.73560	2.41400	26.60799
VI. Institutional Charges	0.31050	0.41750	0.39690	0.10670	1.23160
TOTAL COST (I+II+III)	13.52050	16.66589	9.13250	2.52070	41.83959

<u>S.No.</u>	<u>Cooperating Centre: 3. University of Delhi North Campus, Delhi</u>	2018-19 (August, 2018 to March, 2019)	2019-20 (April, 2019 to March,2020)	2020-21 (April, 2020 to March, 2021)	2021-22 (April, 2021 to July, 2021)	Total
VII. NON RECURRING COST						
1	Civil Works					
	e. Renovation of labs/experimental facilities including laboratory furniture like analysis bench, fume hood etc.)	0.00000	0.00000	0.00000	0.00000	0.00000
	f. New structures for experimental facilities and for special housing for new equipment	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
2.	Goods & Equipment					
	m. Equipment, Plant & Machinery, Technology to be purchased	25.00000	0.00000	0.00000	0.00000	25.00000
	n. Animals: fish	0.00000	0.00000	0.00000	0.00000	0.00000
	o. Furniture & Fixtures	0.00000	0.00000	0.00000	0.00000	0.00000
	p. Computer hardware & software (costing more than Rs. 5000) related specifically to the project	0.00000	0.00000	0.00000	0.00000	0.00000
	q. Monographs, Manuals, databases (non-bibliographical) etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	r. Miscellaneous	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b+c+d+e+f)	25.00000	0.00000	0.00000	0.00000	25.00000
3.	Capacity Building					
	e. Attending Workshops/Seminars/ Exposure Visits					
	v. <u>Abroad</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	vi. <u>India</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i+ii)	0.00000	0.00000	0.00000	0.00000	0.00000
	f. Organizing Training/workshop-cum-Training	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub Total (1+2+3)	25.00000	0.00000	0.00000	0.00000	25.00000

VIII. RECURRENING COSTS						
9. TA/DA	0.17000	0.25000	0.25000	0.08000	0.75000	
10. Review Workshop/Meetings	0.00000	0.00000	0.00000	0.00000	0.00000	
11. Contractual Staff	4.16000	7.65209	8.03520	2.67840	22.52569	
12. Operational Contingencies						
xiii. Laboratory purpose						
k. Chemicals, glassware, raw material, pots etc.	12.00000	15.00000	15.00000	0.00000	42.00000	
l. Unskilled/semi skilled labour	0.00000	0.00000	0.00000	0.00000	0.00000	
m. Outsourcing of lab work	0.00000	0.00000	0.00000	0.00000	0.00000	
n. Small maintenance & repairs of lab equipment (Repair of micromanipulator & accessories)	0.00000	0.00000	0.00000	0.00000	0.00000	
o. Computer stationery	0.00000	0.00000	0.00000	0.00000	0.00000	
xiv. Field purpose						
i. Small field equipment (spade, khurpi etc.) pots, seed, etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
j. Semiskilled/unskilled labour	0.00000	0.00000	0.00000	0.00000	0.00000	
k. Running cost of farm machinery diesel oil etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
l. Small repairs of farm machinery	0.00000	0.00000	0.00000	0.00000	0.00000	
xv. Vehicle hiring for surveys, arranging & attending meetings etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
xvi. Miscellaneous urgent purchases	0.00000	0.00000	0.00000	0.00000	0.00000	
xvii. Small animals: rabbit, mice etc.	0.00000	0.00000	0.00000	0.00000	0.00000	
xviii. Phone/ fax cost	0.00000	0.00000	0.00000	0.00000	0.00000	
Sub-Total (i+ii+iii+iv+v+vi)	12.00000	15.00000	15.00000	0.00000	42.00000	
Sub-Total (1+2+3+4)	16.33000	22.90209	23.28520	2.75840	65.27569	
IX. Institutional Charges	0.81650	1.07450	1.07450	0.10800	3.07350	
TOTAL COST (I+II+III)	42.14650	23.97659	24.35970	2.86640	93.34919	

<u>S.No.</u>	<u>Cooperating Centre: 4. PJTSAU, Hyderabad</u>	2018-19 (August, 2018 to March, 2019)	2019-20 (April, 2019 to March,2020)	2020-21 (April, 2020 to March, 2021)	2021-22 (April, 2021 to July, 2021)	Total
X.	NON RECURRING COST					
1	Civil Works					
	g. Renovation of labs/experimental facilities including laboratory furniture like analysis bench, fume hood etc.)	0.00000	0.00000	5.00000	0.00000	5.00000
	h. New structures for experimental facilities and for special housing for new equipment	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	5.00000	0.00000	5.00000
2.	Goods & Equipment					
	s. Equipment, Plant & Machinery, Technology to be purchased	1.30000	0.00000	0.00000	0.00000	1.30000
	t. Animals: fish	0.00000	0.00000	0.00000	0.00000	0.00000
	u. Furniture & Fixtures	0.00000	0.00000	0.00000	0.00000	0.00000
	v. Computer hardware & software (costing more than Rs. 5000) related specifically to the project	0.00000	0.00000	0.00000	0.00000	0.00000
	w. Monographs, Manuals, databases (non-bibliographical) etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	x. Miscellaneous	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b+c+d+e+f)	1.30000	0.00000	0.00000	0.00000	1.30000
3.	Capacity Building					
	g. Attending Workshops/Seminars/ Exposure Visits					
	vii. <u>Abroad</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	viii. <u>India</u>	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i-ii)	0.00000	0.00000	0.00000	0.00000	0.00000
	h. Organizing Training/workshop-cum-Training	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub Total (1+2+3)	1.30000	0.00000	5.00000	0.00000	6.30000
	XI. RECURRENCE COSTS					

13.	TA/DA	0.20000	0.50000	0.45000	0.10000	1.25000
14.	Review Workshop/Meetings	0.00000	0.00000	0.00000	0.00000	0.00000
15.	Contractual Staff	2.60000	4.79516	5.00960	1.73600	14.14076
16.	Operational Contingencies					
	xix. Laboratory purpose					
p.	Chemicals, glassware, raw material, pots etc.	5.00000	5.00000	5.00000	0.00000	15.00000
q.	Unskilled/semi skilled labour	0.00000	0.00000	0.00000	0.00000	0.00000
r.	Outsourcing of lab work	0.00000	0.00000	0.00000	0.00000	0.00000
s.	Small maintenance & repairs of lab equipment (Repair of micromanipulator & accessories)	0.00000	0.00000	0.00000	0.00000	0.00000
t.	Computer stationery	0.00000	0.00000	0.00000	0.00000	0.00000
	xx. Field purpose					
m.	Small field equipment (spade, khurpi etc.) pots, seed, etc.	0.20000	0.20000	0.10000	0.00000	0.50000
n.	Semiskilled/unskilled labour	2.53000	3.80000	3.50000	1.27000	11.10000
o.	Running cost of farm machinery diesel oil etc.	0.00000	0.00000	0.00000	0.00000	0.00000
p.	Small repairs of farm machinery	0.00000	0.00000	0.00000	0.00000	0.00000
	xxi. Vehicle hiring for surveys, arranging & attending meetings etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	xxii. Miscellaneous urgent purchases	0.00000	0.00000	0.00000	0.00000	0.00000
	xxiii. Small animals: rabbit, mice etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	xxiv. Phone/ fax cost	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i+ii+iii+iv+v+vi)	7.73000	9.00000	8.60000	1.27000	26.60000
	Sub-Total (1+2+3+4)	10.53000	14.29516	14.05960	3.10600	41.99076
	XII. Institutional Charges	0.52650	0.67000	0.66310	0.14130	2.00090
	TOTAL COST (I+II+III)	12.35650	14.96516	19.72270	3.24730	50.29166

Annexure – II
(₹ in lakh)

S.No.	Consolidated Project Budget Year Wise	2018-19 (August, 2018 to March, 2019)	2019-20 (April, 2019 to March,2020)	2020-21 (April, 2020 to March, 2021)	2021-22 (April, 2021 to July, 2021)	Total
1.	NON RECURRING COST					
	Civil Works					
	a. Renovation of labs/experimental facilities including laboratory furniture like analysis bench, fume hood etc.)	0.00000	0.00000	5.00000	0.00000	5.00000
	b. New structures for experimental facilities and for special housing for new equipment	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	5.00000	0.00000	5.00000
2.	Goods & Equipment					
	a. Equipment, Plant & Machinery, Technology to be purchased	60.30000	7.00000	0.00000	0.00000	67.30000
	b. Animals: Buffalo, horse, goat, sheep etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	c. Furniture & Fixtures	0.00000	0.00000	0.00000	0.00000	0.00000
	d. Computer hardware & software (costing more than Rs. 5000) related specifically to the project	3.00000	0.00000	0.00000	0.00000	3.00000
	e. Monographs, Manuals, databases (non-bibliographical) etc.	0.00000	0.00000	0.00000	0.00000	0.00000
	f. Miscellaneous	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b+c+d+e+f)	63.30000	7.00000	0.00000	0.00000	70.30000
3.	Capacity Building					
	a. Attending Workshops/Seminars/ Exposure Visits					
	i. Abroad	0.00000	0.00000	0.00000	0.00000	0.00000
	ii. India	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i+ii)	0.00000	0.00000	0.00000	0.00000	0.00000
	b. Organizing Training/workshop-cum-Training	0.00000	0.00000	0.00000	0.00000	0.00000

		Total (a+b)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub Total (1+2+3)	63.30000	7.00000	5.00000	0.00000	0.00000	0.00000	0.00000	75.30000
II. RECURRENCE COSTS									
1. TA/DA		0.93000	1.90000	1.70000	0.47000				5.00000
2. Review Workshop/Meetings		1.00000	1.00000	1.00000	0.00000				3.00000
3. Contractual Staff		18.52000	35.27838	38.85938	12.18880				104.84656
4. Operational Contingencies									
i. Laboratory purpose									
a. Chemicals, glassware, raw material, pots etc.		35.00000	42.00000	39.00000	0.00000				116.00000
b. Unskilled/semi skilled labour		0.00000	0.00000	0.00000	0.00000				0.00000
c. Outsourcing of lab work		0.00000	0.00000	0.00000	0.00000				0.00000
d. Small maintenance & repairs of lab equipment		0.00000	0.00000	0.00000	0.00000				0.00000
e. Computer stationery		0.00000	0.00000	0.00000	0.00000				0.00000
ii. Field purpose									
a. Small field equipment (spade, khurpi etc.) pots, seed, etc.		0.95000	0.95000	0.35000	0.00000				2.25000
b. Semiskilled/unskilled labour		7.43000	11.80000	10.05000	3.72000				33.00000
c. Feed and medicine		0.00000	0.00000	0.00000	0.00000				0.00000
d. Small repairs of farm machinery		0.00000	0.00000	0.00000	0.00000				0.00000
iii. Vehicle hiring for surveys, arranging & attending meetings etc.									
iv. Miscellaneous urgent purchases		0.00000	0.00000	0.00000	0.00000				0.00000
v. Small animals: rabbit, mice etc.		0.00000	0.00000	0.00000	0.00000				0.00000
vi. Phone/ fax cost		0.00000	0.00000	0.00000	0.00000				0.00000
Sub-Total (i+ii+iii+iv+v+vi)		43.44000	54.85000	49.50000	3.76000				151.55000
Sub-Total (1+2+3+4)		63.89000	93.02838	91.05938	16.41880				264.39656
III. INSTITUTIONAL CHARGES									
		4.24050	5.85600	5.50780	0.91140				16.51570
TOTAL COST (I+II+III)		131.43050	105.88438	101.56718	17.33020				356.21226

Annexure - III

Lead/Cooperating Centre wise/head-wise beak-up of the total fund (Recurring and non-recurring heads)

(₹ in lakh)

S.No.	Consolidated Project Budget Centre Wise	UDSC, New Delhi	IARI, New Delhi	IGKV, Raipur	UDNC, Delhi	PJTSU, Hyderabad	Total
1.	NON RECURRING COST						
	Civil Works						
	a. Renovation of labs/experimental facilities including laboratory furniture like analysis bench, fume hood etc.)	0.00000	0.00000	0.00000	0.00000	5.00000	5.00000
	b. New structures for experimental facilities and for special housing for new equipment	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b)	0.00000	0.00000	0.00000	0.00000	5.00000	5.00000
2.	Goods & Equipment						
	a. Equipment, Plant & Machinery, Technology to be purchased	15.00000	12.00000	14.00000	25.00000	1.30000	67.30000
	b. Animals: Buffalo, horse, goat, sheep etc.	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	c. Furniture & Fixtures	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	d. Computer hardware & software (costing more than Rs. 5000) related specifically to the project	3.00000	0.00000	0.00000	0.00000	0.00000	3.00000
	e. Monographs, Manuals, databases (non-bibliographical) etc.	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	f. Miscellaneous	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Total (a+b+c+d+e+f)	18.00000	12.00000	14.00000	25.00000	1.30000	70.30000
3.	Capacity Building						
	a. Attending Workshops/Seminars/Exposure Visits						
	i. Abroad	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	ii. India	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	Sub-Total (i+ii)	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
	b. Organizing Training/workshop-cum-	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

No. BT/PR6983/PBD/16/1007/2012
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi- 110 003
Dated: 14/01/2015

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: "**Tomato Ripening Network**" for a period of 5 Year 0 Month at a total cost of Rs. **38206400** (Rupees Three Crores Eighty Two Lakhs Six Thousand Four Hundred Only) on the terms and conditions detailed here under:-

2 The Project :

2.1 Title : "Tomato Ripening Network"

2.2 Details of the Investigators:

Project Coordinator

Dr. Arun Kumar Sharma

Associate Professor

Department of Plant Molecular Biology

Delhi University, South Campus

Lab-313, Department of Plant Molecular Biology, Benito Juarez Road,
New Delhi, Delhi, 110021

Principal Investigators:

Dr. Sreelakshmi Y

Assistant Professor

Dept. of Plant Sciences

University of Hyderabad

, Hyderabad, Andhra Pradesh-500046

Dr. Arun K Sharma

Associate Professor

Department of Plant Molecular Biology

Delhi University, South Campus

Benito Juarez Road, New Delhi, Delhi-110021

Dr. Aniruddha P Sane

Principal Scientist

Plant Gene Expression Lab

National Botanical Research Institute, Lucknow

Rana Pratap Marg, Lucknow, Uttar Pradesh-226001



No. BT/PR12394/AGIII/103/891/2014
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi- 110 003
Dated: 20.11.2015

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 "**Functional Characterization of Genetic and Epigenetic Regulatory Networks Involved in the Reproductive Development in Rice**" for a period of 5 Year 0 Month at a total cost of Rs. **98741600** (Rupees Nine Crores Eighty Seven Lakhs Fourty One Thousand Six Hundred Only) on the terms and conditions detailed here under:-

2 The Project :

2.1 Title : Functional Characterization of Genetic and Epigenetic Regulatory Networks Involved in the Reproductive Development in Rice

2.2 Details of the Investigators:

Project Coordinator

Prof. Akhilesh Kumar Tyagi

Director

NIPGR

National Institute of Plant Genome Research, Aruna Asaf Ali Marg, , Delhi,
110067

Principal Investigators:

Prof. Jitendra Paul Khurana

Professor and HOD

Plant Molecular Biology

Delhi University, South Campus

New Delhi-110 021

Prof. Sanjay Kapoor

Professor

Plant Molecular Biology

Delhi University, South Campus

Benito Juarez Road, Dhoola Kuan,

New Delhi-110 021

BT/COE/34/SP15209/2015
Government of India
Ministry of Science & Technology
Department of Biotechnology

Block 2, 6-8th Floors
CGO Complex, Lodi Road,
New Delhi – 110003

Dated: 28.06.2016

ORDER

Sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the implementation of the project entitled “**Programme Support on Genome Engineering of Tomato**” at a total cost of ₹ 716.79 lakhs (Non-Recurring: ₹ 147.48 lakhs + Recurring: ₹ 569.31 lakhs) over a period of five years jointly at University of Hyderabad (UOH), Hyderabad (₹ 501.43 lakhs [NR: ₹ 116.50 lakhs + Recurring: ₹ 384.93 lakhs]), Indian Institute of Horticultural Research (IIHR), Bangalore (₹ 25.07 lakhs [Recurring only]), National Institute of Technology (NIT), Durgapur (₹ 98.55 lakhs [NR: 24.65 lakhs + Recurring: ₹ 73.90 lakhs]) and University of Delhi South Campus (UDSC), New Delhi (₹ 91.74 lakhs [NR: 6.33 lakhs + Recurring: ₹ 85.41 lakhs]) on the terms and conditions detailed here under:

2.0 The Project:

2.1 Project Title: Programme Support on Genome Engineering of Tomato

2.2 Investigators:

Name of the Team Leader & Implementing Institute:	Prof. R.P. Sharma, Repository of Tomato Genomics Resources, Department of Plant Sciences, University of Hyderabad, Central University PO, Gachibowli, Hyderabad – 500046
Name and Address of Co-Leader:	Dr. Y. Sreelakshmi Assistant Professor, Department of Plant Sciences, University of Hyderabad, Hyderabad
Name and Address of Co-Principal Investigator:	1. Prof. Sudip Chattopadhyaya, Department of Biotechnology, National Institute of Technology, Durgapur – 713209 2. Dr. Arun K Sharma, Associate Professor, Department of Plant Molecular Biology, University of Delhi South Campus, Benito Juarez Road, New Delhi – 110021 3. Dr. A.T. Sadashiva, Principal Scientist & Head, Division of Vegetable Crops, ICAR-Indian Institute of Horticultural Research, Hessaraghatta Lake Post, Bangalore – 560089

2.3 Objectives:

Core Objectives:

1. University of Hyderabad (UOH), Hyderabad) (PI: Prof. R. P. Sharma):

1. Genome editing by CRISPR/CAS for targeted induction of mutations in genes regulating tomato fruit quality traits.

To,
Dr. Indranil Dasgupta
Professor
Department of Plant Molecular Biology
University of Delhi South Campus
Benito Juarez Road
New Delhi-110021
indranil58@yahoo.co.in

Dated:23.09.2020

Ref: PACE Project Title " *Development of a virus-inducible gene editing system for resistance against viruses* "

Dear Dr. Dasgupta,

With reference to your above, mentioned PACE proposal, we are pleased to inform that your proposal has been approved by BIRAC at a total cost of **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only). The contribution of BIRAC is **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only). as Grant-in-aid towards the Project. The contribution of BIRAC is **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only). as Grant-in-aid to the **University of Delhi South Campus-Department of Plant Molecular Biology**

If you are in acceptance with the terms of funding support as mentioned in the GLA, the following documents should be executed within a time period of **TWO WEEKS** from the date of issue of this communication

- Grant-in-aid Letter Agreement (GLA) including all the Schedules: All pages to be clearly initialled by the Fund Recipients.
- **Grant-in-aid Letter Agreement (GLA) including all the Schedules: All pages to be clearly initialled with proper stamp by the Fund Recipient.**
 - **Letter of Authorization from the institute in the prescribed format of BIRAC**
 - **Original copy of Bank Details on the Institute's letter head (with proper attested stamp)**

The Grant-in-Aid Letter agreement has been executed by BIRAC, kindly take a **colour printout of this GLA** and the schedules; and execute the same from your end.

The first instalment of fund release will be made only after completion of all these formalities and upon submission of above mentioned documents as per norms.

For Biotechnology Industry Research Assistance Council

Dr. Sanjay Saxena
(GM & Head - Investment)

Sub: Funding of Project entitled "**Development of a virus-inducible gene editing system for resistance against viruses**" for funding under AIR-(PACE)

GRANT-IN-AID LETTER AGREEMENT

This Grant-in-aid Letter Agreement (hereinafter called as "GLA") is between Biotechnology Industry Research Assistance Council, a Government of India enterprise, incorporated under the Companies Act, 2013 having its office at 1st Floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi- 110003 (the "BIRAC") and the entity mentioned below for research proposal entitled "*Development of a virus-inducible gene editing system for resistance against viruses*"

1. Recipient(s) and Designated Project Investigator(s):

S. No.	Recipient(s)	Designated Project Investigator
1	University of Delhi South Campus- Department of Plant Molecular Biology, an Institute having its office at University of Delhi South Campus Benito Juarez Road, New Delhi-110021 , hereinafter referred to as the "Institute" (which expression shall wherever the context so admits include its successors in interest, liquidators, administrators and permitted assignees).	Dr. Indranil Dasgupta Professor Department of Plant Molecular Biology University of Delhi South Campus Benito Juarez Road New Delhi-110021 indranil58@yahoo.co.in

2. Aims & Objectives:

The detailed aims and the objectives that are to be executed by the aforesaid are as per the detailed Project document, submitted including revisions/modifications incorporated therein (hereinafter called as "Project") and appended herein as Schedule 3.

The main objectives proposed to be achieved from the project are enumerated hereunder:

- 1) To study the inducibility of the CP promoter of Sri Lankan cassava mosaic virus SLCMV by viral proteins and upon viral infection, in particular with tomato leaf curl New Delhi virus and tomato leaf curl Gujarat virus
- 2) Use of SLCMV promoter and its derivatives to develop a "virus-inducible" CRISPR-Cas9 system in tomato plant
- 3) To use the above system to develop resistance against ToLCNDV and ToLCGV and other related viruses in tomato and to study off-target editing of viruses in the above virus-inducible CRISPR-Cas9 system.

3. Project Duration: The Recipient shall complete the Project within the stipulated period of **18** months from the date of acceptance of the GLA by all the recipient. In the event the Parties affix

their signatures to this GLA on separate dates, the GLA shall be effective from the date on which the last set of signature is affixed thereto "**Effective Date**". Project Duration is subject to the Change order(s) issued by the BIRAC from time to time.

4. Project Implementation Site:

Department of Plant Molecular Biology
University of Delhi South Campus
Benito Juarez Road
New Delhi-110021.

5. Project Cost and Contribution: The total estimated cost of the Project is **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only). The contribution of BIRAC is **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only) as Grant-in-aid to the **University of Delhi South Campus-Department of Plant Molecular Biology**. on the terms and conditions detailed in this GLA.

6. BIRAC Budget break-up ((Rs.in Lakhs):

Details	Support under PACE to	Total
	University of Delhi South Campus-Department of Plant Molecular Biology	
Non-recurring	0.00	0.00
Recurring	30.00	30.00
Total	30.00	30.00

BUDGET Break-up Recurring (Rs In Lakhs)		
Recurring items	Contribution by BIRAC to University of Delhi South Campus-Department of Plant Molecular Biology	Total
Manpower	10.50	10.50
Consumables	3.10	3.10
Travel	0.00	0.00
Outsourcing	15.90	15.90
Contingency & Other Costs	0.50	0.50
Total	30.00	30.00

7. Milestones/Timelines

S.No.	Milestones	Month of end of activity	Required financial input (Rs. In Lakhs)
1	Acceptance of Undertaking under GLA <i>And</i> Fulfilment of fund release requirements	0	9.00 (30% of BIRAC contribution)
2	Status report Testing the induction of Cas9 and sgRNA expression in the transgenic Tomato (TRL 3) <i>And</i> Submission of UC/SOE for the corresponding milestone certified by internal finance.	14	6.00 (20% of BIRAC contribution)

3	Status report Challenging of transgenic lines to assess virus resistance (TRL 4) <i>And</i> Submission of UC/SOE for the corresponding milestone certified by internal finance.	15	6.00 (20% of BIRAC contribution)
4	Status report Data compilation and analysis regarding resistance, off-target effects and generation of editing resistant viral population using the virus-inducible CRISPR-Cas9 system (TRL 5) <i>And</i> Submission of UC/SOE for the corresponding milestone certified by internal finance.	17	6.00 (20% of BIRAC contribution)
5	Submission of final completion report and consolidated Utilization Certificate (UC) and Statement of Expenses (SOE) by CA/External auditor	18	3.00 (10% of BIRAC contribution)
		Total	30.00
<p>Note:- Utilization Certificate (UC) and Statements of Expenses (SOE) duly audited by a chartered accountant for the expenditure incurred towards the Project for every half year period, ending 30th September and 31st March, to BIRAC, within a month of closure of the accounts for the respective half year should be submitted by the Fund Recipient till completion of Project Duration.</p> <p>The Institute shall submit audited Annual reports along with the audited balance sheets and profit & loss accounts to BIRAC within six months of the completion of the financial year ending 31st March till the Project duration.</p>			

Regulatory Requirement :

- *RCGM clearance before the start of making the CRISPR-CAS9 tomato plants*

8. Periodic Payment/Release Arrangements of the project support based on milestones

Instalment	Contribution by BIRAC under PACE to University of Delhi South Campus- Department of Plant Molecular Biology	Total (Rs. in Lakhs)
First	9.00	9.00
Second	6.00	6.00
Third	6.00	6.00
Fourth	6.00	6.00
Fifth	3.00	3.00
Total	30.00	30.00

9. The recipient of the fund should convey their acceptance to the terms and conditions of this GLA within four (4) weeks of the issue of GLA failing which the present offer of the funding support will be considered as infructuous and the project will be treated as withdrawn.

10. Inclusion by Reference:

This GLA includes and incorporates by this reference:	-Terms and Conditions (Schedule 1) - Acceptance and Undertaking (Schedule 2) - Project document (Schedule 3) - Intellectual Property Governing Framework(Schedule 4)
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11. The Expenditure is debitable to B.04 - Head of Accounts for the financial year 2020-21.

12. This issue with the approval of competent authority vide BFD No. **BFD/AO/B.04/081/2020-2021** dated **20th September' 2020**.

13. The GLA has been noted at Serial No. **8** in the Register of Grant/Cost.

This GLA is between Biotechnology Industry Research Assistance Council ("BIRAC") and **University of Delhi South Campus-Department of Plant Molecular Biology**, and is effective as of the date of last signature. Each party to this GLA may be referred to individually as a "Party", **University of Delhi South Campus-Department of Plant Molecular Biology** as "Fund Recipient" and all Party together as the "Parties". As a condition of this grant, the Parties enter into this GLA by having their authorized representatives sign below:

I) For and on behalf of BIRAC
Signature
Name: Dr. Sanjay Saxena
Designation : GM & Head – Investment
Official Seal

I) For and on behalf of **University of Delhi South Campus-Department of Plant Molecular Biology**, the “**fund recipient**” duly authorized vide letter dated by its concerned authority.

Signature

Name

Designation

Institute Seal

The terms and conditions for Project support under Grant-in-aid Letter Agreement (hereinafter called as “GLA”) are as follows;

1. FUND DISBURSEMENT

- a. First installment of the Grant-in-aid will be released after issue of the GLA subject to fulfillment of the terms and conditions for such release by the relevant Parties. Further release of funds shall be subject to satisfactory progress against the objectives, outputs, milestones and targets specified in the Project which progress shall be determined by BIRAC and on submission of audited/certified statements of accounts and utilization certificates as provided for in Point 2 (a).

2. FUND UTILISATION AND ACCOUNTING

- a. The Fund Recipient shall submit the Utilization Certificate (UC) and Statements of Expenses (SOE) duly audited by a Chartered Accountant (CA) for the expenditure incurred towards the Project for every half year period, ending 30th September and 31st March, to BIRAC, within a month of closure of the accounts for the respective half year, in the format provided by BIRAC.
- b. The Fund Recipient shall submit UC and SOE duly certified by Internal finance personnel to BIRAC in the format provided on the completion of the respective milestones. The Fund Recipient shall submit final consolidated UC and SoE duly certified by a CA/ External Auditor to BIRAC in the format provided on the completion of the project.
- c. The input credit for the expenditures incurred under the project out of Grant-in-aid shall be reported to BIRAC as a part of utilization certificate against the corresponding entry- “Amount of GST Input credit”. Such amount, if any, will be considered accordingly at the time of the release of the next instalment.
- d. The Fund Recipient shall submit audited Annual reports along with the audited balance sheets and profit & loss accounts to BIRAC within six months of the completion of the financial year ending 31st March till the completion of the Project Duration.
- e. The Fund Recipient shall keep the Grant-in-aid assistance in an interest bearing account with a Scheduled Bank (as defined under the RBI Act, 1934), the withdrawals and payments from which account shall be subject to verification by BIRAC. The interest earned on the Grant-in-aid should be reported to BIRAC. The interest thus earned on the grant in aid will be adjusted towards further instalment of the fund.
- f. The Fund Recipient shall ensure that the funds released for the Project are actually utilized only for the purposes of the Project and as expressly provided for in this GLA. Re-appropriation of BIRAC funds from one budget head to another shall not be effected without the specific written approval of BIRAC;
- g. The Fund Recipient shall refund such part of Grant-in-aid funds disbursed to it that remains unutilized with it upon completion of all the responsibilities, duties and functions specified in connection with the Project, within one month of such

completion, to BIRAC along with consolidated accounts of the funds received and utilized and of the unutilized balance returned (UC &SOE);

- h. The Fund Recipient at their own cost shall take adequate care to maintain the capital assets acquired for the Project through BIRAC's Grant-in-aid. The capital assets acquired through BIRAC's Grant-in-aid shall not be disposed of or hypothecated without the specific approval of BIRAC till full and final settlement of all dues to the satisfaction of BIRAC.

3. PROJECT MONITORING

A Project Monitoring Committee (PMC) comprising of eminent experts from the relevant field(s) will be constituted by BIRAC to monitor the progress of the objective(s) of the Project. BIRAC shall have at least one representative in the PMC.

The functions of the PMC shall be as follows:

- a. To monitor the progress of the Project in conformity with the outputs, milestones, targets objectives and other terms and conditions as contained in the GLA
- b. To keep track of funding from any other source for the Project.
- c. To assess the global developments impacting the domain of the Project.
- d. Based on the foregoing, to assess and recommend:
 - i. the release of next installment or part release thereof by the BIRAC.
 - ii. revision of Project Duration
 - iii. closing, dropping or modifying any of the components of the Project, within the overall approved objectives, budget and time-frame,
 - iv. inclusion of additional industrial/institutional partner(s), if the Institute requests involvement of such partner(s), in the overall interest of the Project; and
 - v. revision of the financial assistance.
- e. To advise on issues related to securing of IPR and mentor to overcome any technological problem faced in the Project implementation; and
- f. To advise on any other matter as referred to it by BIRAC and/or otherwise reasonably necessary for effective discharge of its duties and/or achievement of aims and objectives of the Schemes.

4. INDEMNIFICATION

- a) The Fund Recipient shall, at all times, indemnify and keep indemnified BIRAC against any claims or suits in respect of any losses, damages or compensation payable in consequences of any accident, death or injury sustained by their employees or by any other third party resulting from or by any act, omission or operation conducted by or on their behalf;
- b) The Fund Recipient shall, at all times, indemnify and keep indemnified BIRAC against all claims/damages etc. by any infringement of any Intellectual Property Rights (IPR) while carrying out their responsibilities/work under the Project and this GLA.
- c) The provision of Grant-in-aid funds by BIRAC does not create any liability, explicit or implicit, on BIRAC in respect of the manpower engaged in the Project.
- d) The Parties shall not be held responsible for non-fulfilment of their respective obligations in successful completion of the Project under this GLA due to the exigency of one or more force majeure events such as but not limited to acts of God, war, flood, earthquakes etc.

5. CHANGE OF CONTROL:

BIRAC shall reserve the right to reconsider further funding assistance, governance of the New Intellectual Property and consider refund of the amount of Grant-in-aid in such circumstances of change of control as mentioned the following paragraphs;

- a. The Fund Recipient and the Institutes shall notify BIRAC of any material change in its entity status, entity name, Project Coordinator, implementation site, registered office or any such change that would impact on performance of its obligations under the Project and this GLA.

6. FORECLOSURE AND TERMINATION

- i. In case, during the tenure of the Project, it is found that the Project or any Project component is not likely to lead to successful completion, BIRAC may decide to foreclose the Project or the Project component as warranted. The decision of the BIRAC shall be final in all respects. The Fund Recipient shall immediately refund any grant-in-aid unutilized out of BIRAC's disbursements, along with detailed accounts of funds received, utilized and unutilized. If Fund Recipient like to continue the Project at its own cost, it would be able to do so without restrictions from BIRAC after complying with these provisions.
- ii. The Fund Recipient may, before the completion of the Project, terminate this Agreement by giving three months' notice in writing to BIRAC. BIRAC may also terminate this Agreement by written notice to "Fund Recipient" committing breach of any term of this Agreement and either not rectifying it to the satisfaction of BIRAC or not satisfying BIRAC about its inevitability within a specified period. In the event of termination of the Agreement, no further disbursement shall be made by BIRAC. The Fund Recipient shall be liable to return immediately the amount of Grant-in-aid already availed of from BIRAC with additional simple interest at the rate of 12 (twelve) per cent per annum within 30 (thirty) days of termination of the GLA. Interest on the quantum of funding assistance shall accrue from the date of release of the grant in aid assistance. In case of failure to repay, without prejudice to any other rights under this Agreement, the amount can be recovered by initiating any procedure available in Law.

7. DISPUTE RESOLUTION AND ARBITRATION

In the event of any dispute or difference whatsoever arising between the Parties out of or relation to the construction, meaning, scope, operation or effect of this agreement or the validity the breach thereof shall be resolved amicably by mutual consultation or through the good offices of the Chairman, BIRAC.

If such resolution is not possible, then the unresolved dispute or difference whatsoever arising between the Parties out of or relation to the construction, meaning, scope, operation or effect of this GLA or the validity the breach thereof or in respect of any defined legal relationship associated therewith or derived there from dispute shall be submitted for arbitration to International Center for Alternate Dispute Resolution (ICADR), an autonomous organization working under the aegis of the Ministry of Law & Justice, Department of Legal Affairs, Government of India. The Authority to appoint the arbitrator(s) shall be the ICADR. The Arbitration under this Clause and provision of administrative services by ICADR shall be in accordance with the ICADR Arbitration Rules, 1996 read with the New Delhi International

Arbitration Centre Act 2019. The award made in pursuance thereof shall be binding on the Parties. The venue of arbitration shall be New Delhi and the arbitration proceedings shall be conducted in English Language.

The provision of this Clause shall not become inoperative notwithstanding the GLA expiring or ceasing to exist or being terminated or foreclosed.

8. EFFECT AND AMENDMENTS TO THE GLA

- i. GLA shall remain in force for whichever of these is the longest time unless suspended sooner:
 - a. For **18 Months** from the above Effective Date subject to the Change Order(s) issued by the BIRAC from time to time;
 - b. As long as any part of the amount disbursed for the Project remains unspent; or
 - c. For as long as any monitoring or recording or IP governance is required under any relevant laws and regulations.
- ii. No amendment or modification of this GLA shall be valid unless the same is made in writing by the Parties or their authorized representatives specifically stating the same to be an amendment of this GLA. The modifications / changes shall be effective from the date on which they are made / executed unless otherwise agreed to.

9. SEVERABILITY

In case any one or more of the provisions or parts of a provision contained in this GLA shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision or part of a provision of this GLA; and this GLA shall, to the fullest extent lawful, be construed as if such invalid or illegal or unenforceable provision, or part of a provision, had never been contained herein.

10. GOVERNING LAW

This GLA and the associated undertaking shall be governed and interpreted in accordance with the laws of India subject to the exclusive jurisdiction of the Courts at New Delhi.

Acceptance & Undertaking

In consideration of the foregoing, the fund recipient, intending to be admittedly bound by the terms set forth above, undertake as stated below;

The recipient of the Grant shall;

1. Execute the activities as set out in the Project document and shall conform to the specified objectives, outputs, milestones, and targets therein at Schedule 3.
2. Submit periodic Progress report to BIRAC as per the Project milestones, details of activities involved in performing the Project activities, Utilization Certificate (UC) and Statements of Accounts Expenses (SOE) as per Schedule 1.
3. Comply with the fund utilization and accounting requirements as per Schedule 1.
4. Obtain all the necessary requisite approvals, clearance certificates, permissions and licenses from the Government/local authorities for conducting its activities/ operations in connection with the Project.
5. Abide by the decisions of BIRAC to modify the objectives, outputs, milestones, targets, Project Grant-in-aid as also the foreclosure of the Project or any of its components as may be arrived at after mutual discussion.
6. Subject themselves to Project monitoring of the Project Monitoring Committee (PMC).
7. Maintain strict confidentiality and refrain from disclosure thereof, of all or any part of such information and data exchanged/generated from the Project which is not in the public domain by use and/or publication at the time of its disclosure except for purposes in accordance with this Project or is required by public authority, by law or decree.
8. Shall verify the completion of the milestone and the utilization of the funds as stated which will be a pre requisite for the next fund release.
9. Complete the Project within the stipulated period subject to the Change Order(s) issued by the BIRAC from time to time.
10. The Fund Recipient shall not sub-delegate or outsource the obligations under this GLA without express permission of BIRAC except as provided for in the Project Document.
11. Adhere to this GLA and the Conditions of Grant, as, violation of any provision of which shall be the reason for suspension of the Grant.
12. Consider any changes to the provisions of this GLA when made in writing only and shall consider any notice duly served if the same shall have been delivered electronically through the official mail of the Project Coordinator or delivered by post at the addresses mentioned in the GLA.
13. Acknowledge the assistance of BIRAC while publishing or presenting in any manner the details of the Project, its progress or its success or commercialization of the Product.

IN ACCEPTANCE WHEREOF the fund recipient hereto through their duly authorized representatives have signed this undertaking as set below:

For and on behalf of University of Delhi South Campus-Department of Plant Molecular Biology , the “ Institute ” “Fund Recipient”	
Date and Place:	
Signature	
Name	
Designation	
Seal	
Witness	
Name:	Name:
Signature:	Signature:
Address:	Address:

Project Document:

OBJECTIVE AND TIMELINES
PROPOSAL OBJECTIVES & WORK PLAN
Objective1: To study the inducibility of the CP promoter of Sri Lankan cassava mosaic virus SLCMV by viral proteins and upon viral infection, in particular with tomato leaf curl New Delhi virus and tomato leaf curl Gujarat virus
Methodology/Experimental Design To Accomplish The Stated Objective: Construct/clones required- SLCMV promoter IR1 -driven reporter gene IR1-GUS and SLCMV AC2 expressing clone are already available in the lab Experiment: Agroinoculation and co-infiltration of IR1-GUS and SLCMV AC2 in tomato followed by quantification of GUS expression using MUG assay. Note: Already constructed in the lab . The same experiments will be repeated with the other two viruses mentioned, the infectious clones of which are available or will be obtained.
Alternate Strategies: Several deletion derivatives of the IR1 promoter will also be included in the study to obtain an optimally virus-inducible promoter.
Objective 2: Use of SLCMV promoter and its derivatives to develop a virus-inducible CRISPR-Cas9 system in tomato plant
Methodology/Experimental Design To Accomplish The Stated Objective: Construct/clones required- o Designing and cloning of guide RNA sgRNA against ToLCNDV and ToLCGV. o Cloning of Cas9 and sgRNA under IR1 or constitutive promoter to produce IR1-Cas9 and constitutive promoter-sgRNA. Experiments: o Confirmation of induction of Cas9 and sgRNA expression upon ToLCNDV and ToLCGV infection in transient system would involve co-infiltration of IR1-Cas9 & the agroinfectious clones of ToLCNDV and ToLCGV and IR1-sgRNA & agroinfectious clones followed by real-time RCR
Alternate Strategies: Several varieties of tomato will be used for transformation to obtain a good number of transformed lines
Objective3: To use the above system to develop resistance against ToLCNDV and ToLCGV and other related viruses in tomato and to study off-target editing of viruses in the above virus-inducible CRISPR-Cas9 system.
Methodology/Experimental Design To Accomplish The Stated Objective: Construct/clones required- Cloning of Cas9 and sgRNA under constitutive promoter to produce 35S-Cas9 and constitutive promoter-sgRNA followed by the production of transgenic tomato plants expressing 35S-Cas9 and constitutive promoter-sgRNA. Experiment- Transgenic tomato expressing 35S-Cas9 & constitutive promoter-sgRNA and IR1-Cas9 & IR1-sgRNA would be infected with ToLCNDV and ToLCGV by agroinoculation, followed by symptom grading and real-time PCR to check levels of virus accumulation. Check for off-target mutagenesis using deep amplicon sequencing in tomato transgenic expressing the above constructs infected with ToLCNDV and ToLCGV. The sequencing service will be outsourced, but the bioinformatic

analysis to detect the off-target effects will be performed in the lab. To determine the generation of editing-resistant mutant viral populations, in-depth analysis of the virus population in transgenic tomato expressing 35S-Cas9 & constitutive promoter-sgRNA and IR1-Cas9 & IR1-sgRNA infected with ToLCNDV and ToLCGV using Deep sequencing of the viral amplicons will be performed. This service will be outsourced and the data will be analysed in the lab.

Alternate Strategies: Rolling Circle amplification method will also be tried to amplify any viral molecule which might persist in plants despite the operation of the CRISPR-Cas9 system

TIME LINES		
Activities	Month Of End Of Activity	Indicators Of Progress
Objective 1: To study the inducibility of the CP promoter of Sri Lankan cassava mosaic virus SLCMV by viral proteins and upon viral infection, in particular with tomato leaf curl New Delhi virus and tomato leaf curl Gujarat virus		
Cloning of AC2 of ToLCNDV and ToLCGV in expression vector	3	Cloned versions of the two proteins obtained
To test the induction of SLCMV promoter and its derivatives by ToLCNDV and ToLCGV proteins AC2 and viral proteins of other related viruses in a transient system	4	Transient expression assay would indicate the expected induction
SLCMV promoter and its derivatives would be obtained which show inducibility by the target viruses ToLCNDV , ToLCGV and other viruses	4	The degree of inducibility of the SLCMV promoters and its derivatives would be quantified
Activities	Month Of End Of Activity	Indicators Of Progress
Objective 2: Use of SLCMV promoter and its derivatives to develop a virus-inducible CRISPR-Cas9 system in tomato plant		
Designing and cloning of sgRNA against ToLCNDV and ToLCGV under IR1 and CaMV35S promoters	6	The cloning would be completed

Cloning of Cas9 under IR1 and CaMV35S promoter	6	The cloning would be completed
Testing the induction of Cas9 and sgRNA expression in the transgenic Tomato	15	Transgenic tomato plants would be obtained which show induction of Cas9 and sgRNA upon infecting with ToLCNDV and ToLCGV
Activities	Month Of End Of Activity	Indicators Of Progress
OBJECTIVE 3 : To use the above system to develop resistance against ToLCNDV and ToLCGV and other related viruses in tomato and to study off-target editing of viruses in the above virus-inducible CRISPR-Cas9 system.		
Challenging of transgenic lines to assess virus resistance	15	Data on challenge inoculation and viral resistance will be obtained
Bioinformatic analysis for off-target mutations in the viral population based on the deep amplicon sequencing and SMRT sequencing	17	Bioinformatic analysis of the sequence will be completed
Data compilation and analysis regarding resistance, off-target effects and generation of editing resistant viral population using the virus-inducible CRISPR-Cas9	17	Compilation of data will be completed
Submission of Report		

INTELLECTUAL PROPERTY GOVERNING FRAMEWORK

a. Background IP Rights:

All rights, title and interest in or to any information, data, reports, documents, procedures, forecasts, technology, know-how, and inventions, including any patents, designs, copyrights, trademarks and any applications for patents, designs, copyrights or trademarks, in India and anywhere else in the world, that are owned by or vest in any Party before execution of this Agreement (“Background IP”) shall remain the property of such Party.

b. New IP:

For the purpose of PACE, New IP means intellectual property generated during the conduct of the Project by the Fund Recipient excluding the intellectual property generated by the Institute before execution of this Agreement and any New IP generated by the Fund Recipient outside the scope of this Agreement even during the term of this Agreement. All rights, title and interest in New IP in India and anywhere else in the world, shall be owned by or vest in the applicant academia unless agreed otherwise between the parties.

The fund recipient will not publish in any manner with regard to the results of the Project which will be in derogation to the creation and protection of IP and related rights as stated above.

NOTE:For the purpose of this GLA, New IP means intellectual property generated during the conduct of the Project by the Fund Recipient, but excluding the intellectual property generated by the Fund Recipient before execution of this GLA and any IP generated outside the scope of this GLA even during the term of this GLA.

1. The background Intellectual Property (IP) generated by the Fund Recipient before execution of this GLA are as provided hereunder;

I	Background IP of the Institute
The applicant does not own any IP related to the project	

To,
Dr. Indranil Dasgupta
Professor
Department of Plant Molecular Biology
University of Delhi South Campus
Benito Juarez Road
New Delhi-110021
indranil58@yahoo.co.in

Dated:23.09.2020

Ref: PACE Project Title " *Development of a virus-inducible gene editing system for resistance against viruses* "

Dear Dr. Dasgupta,

With reference to your above, mentioned PACE proposal, we are pleased to inform that your proposal has been approved by BIRAC at a total cost of **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only). The contribution of BIRAC is **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only). as Grant-in-aid towards the Project. The contribution of BIRAC is **Rs. 30.00** Lakhs (Rupees Thirty Lakhs only). as Grant-in-aid to the **University of Delhi South Campus-Department of Plant Molecular Biology**

If you are in acceptance with the terms of funding support as mentioned in the GLA, the following documents should be executed within a time period of **TWO WEEKS** from the date of issue of this communication

Grant-in-aid Letter Agreement (GLA) including all the Schedules: All pages to be clearly initialled by the Fund Recipients.

- **Grant-in-aid Letter Agreement (GLA) including all the Schedules: All pages to be clearly initialled with proper stamp by the Fund Recipient.**
- **Letter of Authorization from the institute in the prescribed format of BIRAC**
- **Original copy of Bank Details on the Institute's letter head (with proper attested stamp)**

The Grant-in-Aid Letter agreement has been executed by BIRAC, kindly take a **colour printout of this GLA** and the schedules; and execute the same from your end.

The first instalment of fund release will be made only after completion of all these formalities and upon submission of above mentioned documents as per norms.

For Biotechnology Industry Research Assistance Council

Dr. Sanjay Saxena
(GM & Head - Investment)

FILE NO. CRG/2019/001172
SCIENCE & ENGINEERING RESEARCH BOARD(SERB)
(A statutory body of the Department of Science & Technology, Government of India)

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

Dated: 06-Feb-2020

ORDER

Subject: Financial Sanction of the research project titled "**Development of a Cell-line based Starch Bio-factory System by Manipulating Components of Starch Regulatory and Biosynthetic Machinery in Tobacco BY-2 Cells**" under the guidance of Prof. Sanjay Kapoor, Plant Molecular Biology, University of Delhi, South Campus, New delhi, delhi, New delhi, Delhi-110021 - Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned project at a total cost of **Rs. 5299888/- (Rs. Fifty Two Lakh Ninety Nine Thousand Eight Hundred and Eighty Eight Only)** with break-up of **Rs. 0/- under Capital (Non-recurring) head** and **Rs. 5299888/- under General (Recurring) head** for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 5299888/-** has been approved are given below:

S. No	Head	Total (in Rs.)
A	Non-recurring	
1	Equipment	0
A'	Total (Non-Recurring)	0
B	Recurring Items	
1	Recurring - I : (Manpower)	2098080
	Recurring - II : (Consumables, Travel, Contingencies)	2700000
	Recurring - III : Scientific Social Responsibility	20000
2	Recurring - IV : (Overhead Charges)	481808
B'	Total (Recurring)	5299888
C	Total cost of the project (A' + B')	5299888

2. Sanction of the **SERB** is also accorded to the payment of **Rs. 1779900/-** (Rupees Seventeen Lakh Seventy Nine Thousand Nine Hundred only) under 'Grants-in-aid General' to **Director, University of Delhi South Campus, University Of Delhi, South Campus, New Delhi, Delhi** being the first installment of the grant for the year 2019-2020 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 Core Research Grant. (Interdisciplinary Biological Sciences)

4. The Sanction has been issued to University Of Delhi, South Campus, New Delhi, Delhi with the approval of the competent authority under delegated powers on **04 February, 2020** and vide Diary No. **SERB/F/9680/2019-2020** dated **05 February, 2020**

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. While providing operational flexibility among various subheads under head Recurring-II, it should be ensured that not more than **Rs. 1.5 lakh** each should be spent for travel and contingency.

8. Budget sanctioned under Scientific Social Responsibility (SSR) is meant only for activities enlisted under SSR norms and under no circumstances it can be reappropriated.

9. 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.

10. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of **SERB**.

11. The release amount of **Rs. 1779900/-** (Rupees Seventeen Lakh Seventy Nine Thousand Nine Hundred only) will be drawn by the Under Secretary of the **SERB** and will be disbursed by means of RTGS transaction as per their Bank details given below:

PFMS Unique Code	UDSC75
Account Name	Director, Research Project Office A/C
Account Number	10043546386
Bank Name & Branch	State Bank of India SOUTH CAMPUS UNIVERSITY OF DELHI, BENITO JUAREZ ROAD, NEW DELHI-110021
IFSC/RTGS Code	SBIN008778
Email id of A/C Holder	ar.finance@south.du.ac.in
Email id of PI	kapoors@south.du.ac.in

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

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

14. The project File no. CRG/2019/001172 may also be mentioned in all research communications arising from the above project with due acknowledgement of SERB.


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

16. As this is the first grant being released for the project, no previous U/C is required.

17. 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.

18. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board should invariably be highlighted/ acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.

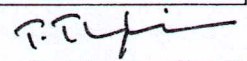
19. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by the Science & Engineering Research Board.


(Dr. Thangaradjou T)
Scientist E
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.	Prof. Sanjay Kapoor Plant Molecular Biology University of Delhi, South Campus , New delhi, delhi, New delhi, Delhi-110021 Email: kapoors@south.du.ac.in Mobile: 919811644436 (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.	Director, University of Delhi South Campus, University Of Delhi, South Campus, New Delhi, Delhi (Receipt of Grant may be intimated by name to the undersigned)


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



Government of India
Department of Atomic Energy
Board of Research in Nuclear Sciences

Dr. Ashok K. Pandey
Programme Officer (FOS)

BRNS
Secretariat, 316-C, CFB, BAR
C. Trombay, Mumbai-400085
Phone: 022 2559 4566
Email: prog-bsc@barc.gov.in

No: 55/14/01/2020-BRNS/

Date:

OFFICE MEMORANDUM

Sub: R/P entitled "Utilization of halophyte specific genes for improving abiotic stress tolerance in crop plants" under Dr. Girdhar Kumar Pandey, Department of Plant Molecular Biology University of Delhi South Campus Benito Juarez Road, Dhaula Kuan, new Delhi-110021.

On the recommendations of the Board of Research in Nuclear Sciences (BRNS), I am pleased to convey the administrative approval and sanction of the President of India for the captioned project for 3 years beginning from financial year 2020-2021 with a total grant of Rs. 33,68,850/- (Rupees thirty three lakh sixty eight thousand eight hundred fifty only) for the project as under :

Item of expenditure	Year 1 (2020-2021)	Year 2 (2021-2022)	Year 3 (2022-2023)
Equipments	100000	0	0
Staff Salary - JRF	372000	372000	0
Staff Salary - SRF	0	0	420000
Technical Assistance	120000	120000	120000
Consumables	400000	350000	350000
Travel - PI	25000	25000	25000
Contingencies	50000	50000	50000
Overheads	76275	65025	68825
Total(INR)	1143275	982025	1033625

Note: * Deep Freezer (-20 degree C)

JRF salary calculated @31,000/- p.m. for first two years and on redesignation by committee on in third year as SRF @ 35,000/- p.m. RA salary-calculated @ 47,000/-p.m.

Please note that as per the government orders under Direct Benefit Transfer (DBT) scheme, the staff salary has to be transferred to his/her bank account. Accordingly, Aadhar Number(UID) of the appointed staff, Bank Account details and the Mobile number linked to the bank account should be obtained and it should be intimated to this office.

Overheads calculated @ 7.5% of the other heads except contingency. The remaining 7.5% towards overheads (Rs. 2,09,925/-) shall be released only on meeting the requirements specified (See Annex-B).

2. I am also pleased to convey the sanction of the President of India to incur an expenditure of Rs. 11,43,275/- (Rupees eleven lakh fourty three thousand two hundred seventy five only) towards grant for the year 3.2020-2021.

The expenditure involved is debitable to: 03 3401 00 004 27 0231.

4 This is Issued with the concurrence of the competent authority in the Department.

✓ Pay & Accounts Officer, DAE, Mumbai - 400 001.
(Bill enclosed)

Rs. 1143275/-
received on
27/2/2020
[Signature]

[Signature]
27/2/2020
Dr. Ashok K. Pandey



REGISTERED

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
EXTRAMURAL RESEARCH DIVISION
CSIR COMPLEX, PUSA, NEW DELHI - 110 012

No. 38(1478)/19/EMR-II ✓
From : Head, Human Resources Development Group

Dated : 24/7/2019

To
✓ PROF GIRDHAR K PANDEY
DEPT OF PLANT MOL BIOLOGY
DELHI UNIV
NEW DELHI 110021 DELHI

Subject: Grants-in-aid for your scheme entitled FUNCTIONAL CHARACTERIZATION OF AIPUB2 (PLANT U-BOX/ARMADILLO) UNDER OXIDATIVE STRESS CONDITIONS IN Arabidopsis thaliana

Sir,

I am directed to refer to your proposal for sanction of CSIR Scheme titled above and to convey the approval of DG CSIR as per the details given below.

I	Duration of the Scheme (from the date of Commencement)	36 Months		
II	Staff	1-RA/SRF/JRI-		
III	Contingency (per annum in ₹)	1 st Year : 5,00,000	2 nd Year : 5,00,000	3 rd Year : 5,00,000
IV	Equipment (lumpsum in ₹)	8,00,000 (LS)		

- The above sanction is subject to review of periodical progress of the project by expert committee.
- DG CSIR has also approved the release of the following grants for the period 01/06/2019 to 31/03/2020

No	Grants	Amount (in ₹)
I	Staff	3,60,000
II	Contingency	4,16,667
III	Equipment	8,00,000
Total :		15,76,667

- Sanction of grants is subject to strict compliance of the terms and conditions enclosed or as may be modified from time to time. Please go through the instructions carefully with regard to subsequent release of grants and your obligations under this sanction. The grant for the 1st installment will be sent through EFT (Electronic Funds Transfer), to the concerned authority of your institution on receipt of undertaking (form-A), non-funding certificate and EFT Transaction Request Form.

The expenditure is debitible to budget head P81102.

Yours faithfully,

SECTION OFFICER (EMR-II)

Encl : As above

Copy to :-

- Registrar/Principal/Director Delhi University New Delhi - 110021. The utilisation of grant is subject to compliance of para-1 of the terms and conditions stated overleaf. (Delhi)
- Sr F&AO(EMR) alongwith FVC for first year's grant.

SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

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

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

Dated: 28-Jun-2019

ORDER

Subject: Financial Sanction of the research project titled "**Detail expression analysis of CIPK9 and identification of upstream regulatory sequences responsive to potassium deficiency in Arabidopsis**" under the guidance of Prof. Girdhar Kumar Pandey, PLANT MOLECULAR BIOLOGY, University of Delhi, South Campus, New delhi, delhi, New delhi, Delhi-110021 - Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned project at a total cost of **Rs. 3787696/- (Rs. Thirty Seven Lakh Eighty Seven Thousand Six Hundred and Ninety Six Only)** with break-up of **Rs. 200000/- under Capital (Non-recurring) head** and **Rs. 3587696/- under General (Recurring) head** for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 3787696/-** has been approved are given below:

S. No	Head	Total (in Rs.)
A	Non-recurring	
1	Equipment -> Minor equipments:pH meter, TDS meter Gel eletrophoresis (Horizontal and vertical) and other	200000
A'	Total (Non-Recurring)	200000
B	Recurring Items	
1	Recurring - I : (Manpower) Recurring - II : (Consumables, Travel, Contingencies) Recurring - III : Scientific Social Responsibility	1443360 1740000 60000
2	Recurring - IV : (Overhead Charges)	344336
B'	Total (Recurring)	3587696
C	Total cost of the project (A' + B')	3787696

2. Sanction of the **SERB** is also accorded to the payment of **Rs. 200000/-** (Rupees Two Lakh only) under 'Grants for creation of capital assets' and **Rs. 1201280/-** (Rupees Twelve Lakh One Thousand Two Hundred and Eighty only) under 'Grants-in-aid General' to **Director, University Of Delhi, South Campus, New Delhi, Delhi** being the first installment of the grant for the year 2019-2020 for implementation of the said research project.

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

4. The Sanction has been issued to University Of Delhi, South Campus, New Delhi, Delhi with the approval of the competent authority under delegated powers on **26 June, 2019** and vide Diary No. **SERB/F/2058/2019-2020** dated **27 June, 2019**

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. While providing operational flexibility among various subheads under head Recurring-II, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.

8. 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.

9. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.

10. The release amount of **Rs. 1401280/-** (Rupees Fourteen Lakh One Thousand Two Hundred and Eighty 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:

Account Name	Director, University of Delhi, South Campus
Account Number	100435 46386
Bank Name & Branch	State Bank of India State Bank of India, South Campus Branch, New Delhi 110021
IFSC/RTGS Code	SBIN0008778
Email id of A/C Holder	dir_udsc@du.ac.in
Email id of PI	gkpandey@south.du.ac.in

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

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

13. The project File no. CRG/2018/001749 may also be mentioned in all research communications arising from the above project with due acknowledgement of SERB.

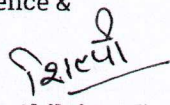
14. The manpower sanctioned in the project, if any is co-terminus with the duration of the project and SERB will have no liability to meet the fellowship and salary of supporting staff if any, beyond the duration of the project.

15. As this is the first grant being released for the project, no previous U/C is required.

16. 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.

17. The organization/institute/university should ensure that the technical support/financial assistance provided to them by the Science & Engineering Research Board should invariably be highlighted/acknowledged in their media releases as well as in bold letters in the opening paragraphs of their Annual Report.

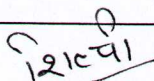
18. In addition, the investigator/host institute must also acknowledge the support provided to them in all publications, patents and any other output emanating out of the project/program funded by the Science & Engineering Research Board.


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

To,
Under Secretary
SERB, New Delhi

Copy forwarded for information and necessary action to: -

1.	The Principal Director of Audit, A.G.C.R. Building, IIIrd Floor I.P. Estate, Delhi-110002
2.	Sanction Folder, SERB, New Delhi.
3.	File Copy
4.	Prof. Girdhar Kumar Pandey PLANT MOLECULAR BIOLOGY University of Delhi, South Campus, New Delhi, Delhi, New Delhi, Delhi-110021 Email: gkpandey@south.du.ac.in Mobile: 919811721436 (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.	Director, University Of Delhi, South Campus, New Delhi, Delhi (Receipt of Grant may be intimated by name to the undersigned)


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

77

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No. BT/PR24637/NER/95/787/2017
 GOVERNMENT OF INDIA
 MINISTRY OF SCIENCE & TECHNOLOGY
 DEPARTMENT OF BIOTECHNOLOGY

App. No.: Agri/2017/14

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

Date: 27/06/2018

RELEASE ORDER

In continuation of this Department's sanction order of even number dated May 29, 2018 sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rule, 1978, for the release of Rs. **3140000.00** (Rupees Thirty One Lakhs Fourty Thousand Only) being the first year release for the project entitled "**Whole Genome and transcriptome changes as a consequence of allo and auto-polyploidy in Vigna L.: Phase II**", being implemented by

1. Prof. Satyawada Rama Rao, North-Eastern Hill University, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong 793022, Shillong - 793022, Meghalaya,
2. Prof. Shailendra Goel, University of Delhi, North Campus, Department of Botany, University of Delhi, North Campus, Delhi 110007, North Delhi - 110007, Delhi,
3. Dr. Surekha Katiyar Agarwal, University of Delhi, South Campus, Department of Plant Molecular Biology, University of Delhi, South Campus, Delhi 110021, South Delhi - 110021, Delhi,

The detailed break-up is as given below:

SNo	Institute Name	Recurring						Total Release Amount (Rs)
		Manpower	Consumable	Travel	Contingency	Others	Overhead	
1	North-Eastern Hill University	360000.00	1000000.00	50000.00	50000.00	0.00	150000.00	1610000.00
2	University of Delhi, North Campus	390000.00	400000.00	15000.00	10000.00	0.00	0.00	815000.00
3	University of Delhi, South Campus	390000.00	300000.00	15000.00	10000.00	0.00	0.00	715000.00

2. The amount of Rs. **3140000.00** /-(Rupees Thirty One Lakhs Fourty Thousand Only) will be directly credited by the Pay & Accounts Officer, DBT in the account as detailed below:

M. S. D. A. S.

1. Rs.1610000.00/- (**Rupees Sixteen Lakhs Ten Thousand Only**) to The Registrar, North-Eastern Hill University, P.O: NEHU Campus, Mawkynroh Umshing,, Shillong - 793022, Meghalaya

Bank Name : Indian Overseas Bank
Branch Name : Shillong branch
A/c No. : 054101000010709
IFSC Code : IOBA0000541
MICR Code : 793020002

2. Rs.815000.00/- (**Rupees Eight Lakhs Fifteen Thousand Only**) to The Registrar, University of Delhi, North Campus, , Delhi - 110007, Delhi

Bank Name : State Bank of India
Branch Name : Delhi University
A/c No. : 10851298650
IFSC Code : SBIN0001067
MICR Code : 110002030

3. Rs.715000.00/- (**Rupees Seven Lakhs Fifteen Thousand Only**) to The Director, University of Delhi, South Campus, New Delhi, Delhi 110021, South Delhi - 110021, Delhi

Bank Name : State Bank of India
Branch Name : South campus Delhi University Branch
A/c No. : 10043546386
IFSC Code : SBIN0008778
MICR Code : 110002175

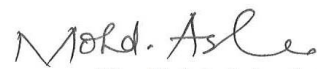
3. The expenditure involved is debitable to:

Demand No. 85	Department of Biotechnology
3425	Other Scientific Research 2018-2019
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.31	Grants-in-Aid General

4. The Registrar, University of Delhi, North Campus, Delhi, Delhi and The Prof. Umesh Rai, University of Delhi, South Campus, South Delhi, Delhi and The Registrar, North-Eastern Hill University, Shillong, Meghalaya 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 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.

Mold. Ash

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 so earned will be treated as created to the institute/Agency and shall be adjusted towards further instalment of the grant and or at the time of Final Settlement of Accounts.
8. The other terms and conditions governing the financial sanction will remain unaltered.
9. This issues under the powers delegated to this Department and with the concurrence of IFD, DBT, vide their SAN No. **102/IFD/SAN/582/2018-2019** dated **May, 29 2018**.
10. This sanction order has been noted at serial no. 77 in the Register of Grants.


(Dr. Mohd Aslam)
Adviser/Scientist 'G'

To,

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

Copy to:

- 1 The Principal Director of Audit (Scientific Departments), AGCR Building, New Delhi- 110 002.
- 2 Prof. Satyawada Rama Rao(Project Co-ordinator), Prof. S. Rama Rao, Professor and Head, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong 793022
- 3 The Registrar, University of Delhi, North Campus, , Delhi - 110007, Delhi
- 4 The Registrar, North-Eastern Hill University, P.O: NEHU Campus, Mawkynroh Umshing,, Shillong - 793022, Meghalaya
- 5 The Director, University of Delhi, South Campus, New Delhi, Delhi 110021, South Delhi - 110021, Delhi
- 6 Prof. Shailendra Goel, Professor, Botany, University of Delhi, North Campus, Department of Botany, University of Delhi, North Campus, Delhi 110007, North Delhi - 110007, Delhi
- 7 Dr. Surekha Katiyar Agarwal, Assistant Professor, Plant Molecular Biology, University of Delhi, South Campus, Department of Plant Molecular Biology, University of Delhi, South Campus, Delhi 110021, South Delhi - 110021, Delhi
- 8 Prof. Satyawada Rama Rao, Professor, Department of Biotechnology and Bioinformatics, North-Eastern Hill University, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong 793022, Shillong - 793022, Meghalaya
- 9 Cash Section, DBT (2 copies).

- 10 Sanction Folder.
- 11 File Copy.
- 12 **US (IFD) DBT with request to re-appropriate an amount of Rs. 3140000.00 this from respective NER Budget**



(Dr. Mohd Aslam)
Adviser/Scientist 'G'

77

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No. BT/PR24637/NER/95/787/2017
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

App. No.: Agri/2017/14

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

Date: 27/06/2018

RELEASE ORDER

In continuation of this Department's sanction order of even number dated May 29, 2018 sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rule, 1978, for the release of Rs. **3140000.00** (Rupees Thirty One Lakhs Fourty Thousand Only) being the first year release for the project entitled "**Whole Genome and transcriptome changes as a consequence of allo and auto-polyploidy in Vigna L.: Phase II**", being implemented by

1. Prof. Satyawada Rama Rao, North-Eastern Hill University, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong 793022, Shillong - 793022, Meghalaya,
2. Prof. Shailendra Goel, University of Delhi, North Campus, Department of Botany, University of Delhi, North Campus, Delhi 110007, North Delhi - 110007, Delhi,
3. Dr. Surekha Katiyar Agarwal, University of Delhi, South Campus, Department of Plant Molecular Biology, University of Delhi, South Campus, Delhi 110021, South Delhi - 110021, Delhi,

The detailed break-up is as given below:

SNo	Institute Name	Recurring						Total Release Amount (Rs)
		Manpower	Consumable	Travel	Contingency	Others	Overhead	
1	North-Eastern Hill University	360000.00	1000000.00	50000.00	50000.00	0.00	150000.00	1610000.00
2	University of Delhi, North Campus	390000.00	400000.00	15000.00	10000.00	0.00	0.00	815000.00
3	University of Delhi, South Campus	390000.00	300000.00	15000.00	10000.00	0.00	0.00	715000.00

2. The amount of Rs. **3140000.00** /-(Rupees Thirty One Lakhs Fourty Thousand Only) will be directly credited by the Pay & Accounts Officer, DBT in the account as detailed below:

M. S. D. A.

1. Rs.1610000.00/- (**Rupees Sixteen Lakhs Ten Thousand Only**) to The Registrar, North-Eastern Hill University, P.O: NEHU Campus, Mawkynroh Umshing,, Shillong - 793022, Meghalaya

Bank Name : Indian Overseas Bank
Branch Name : Shillong branch
A/c No. : 054101000010709
IFSC Code : IOBA0000541
MICR Code : 793020002

2. Rs.815000.00/- (**Rupees Eight Lakhs Fifteen Thousand Only**) to The Registrar, University of Delhi, North Campus, , Delhi - 110007, Delhi

Bank Name : State Bank of India
Branch Name : Delhi University
A/c No. : 10851298650
IFSC Code : SBIN0001067
MICR Code : 110002030

3. Rs.715000.00/- (**Rupees Seven Lakhs Fifteen Thousand Only**) to The Director, University of Delhi, South Campus, New Delhi, Delhi 110021, South Delhi - 110021, Delhi

Bank Name : State Bank of India
Branch Name : South campus Delhi University Branch
A/c No. : 10043546386
IFSC Code : SBIN0008778
MICR Code : 110002175

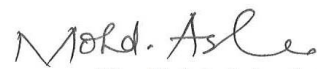
3. The expenditure involved is debitable to:

Demand No. 85	Department of Biotechnology
3425	Other Scientific Research 2018-2019
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.31	Grants-in-Aid General

4. The Registrar, University of Delhi, North Campus, Delhi, Delhi and The Prof. Umesh Rai, University of Delhi, South Campus, South Delhi, Delhi and The Registrar, North-Eastern Hill University, Shillong, Meghalaya 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 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.

Mold. Ash

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 so earned will be treated as created to the institute/Agency and shall be adjusted towards further instalment of the grant and or at the time of Final Settlement of Accounts.
8. The other terms and conditions governing the financial sanction will remain unaltered.
9. This issues under the powers delegated to this Department and with the concurrence of IFD, DBT, vide their SAN No. **102/IFD/SAN/582/2018-2019** dated **May, 29 2018**.
10. This sanction order has been noted at serial no. 77 in the Register of Grants.


(Dr. Mohd Aslam)
Adviser/Scientist 'G'

To,

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

Copy to:

- 1 The Principal Director of Audit (Scientific Departments), AGCR Building, New Delhi- 110 002.
- 2 Prof. Satyawada Rama Rao(Project Co-ordinator), Prof. S. Rama Rao, Professor and Head, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong 793022
- 3 The Registrar, University of Delhi, North Campus, , Delhi - 110007, Delhi
- 4 The Registrar, North-Eastern Hill University, P.O: NEHU Campus, Mawkynroh Umshing,, Shillong - 793022, Meghalaya
- 5 The Director, University of Delhi, South Campus, New Delhi, Delhi 110021, South Delhi - 110021, Delhi
- 6 Prof. Shailendra Goel, Professor, Botany, University of Delhi, North Campus, Department of Botany, University of Delhi, North Campus, Delhi 110007, North Delhi - 110007, Delhi
- 7 Dr. Surekha Katiyar Agarwal, Assistant Professor, Plant Molecular Biology, University of Delhi, South Campus, Department of Plant Molecular Biology, University of Delhi, South Campus, Delhi 110021, South Delhi - 110021, Delhi
- 8 Prof. Satyawada Rama Rao, Professor, Department of Biotechnology and Bioinformatics, North-Eastern Hill University, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong 793022, Shillong - 793022, Meghalaya
- 9 Cash Section, DBT (2 copies).

- 10 Sanction Folder.
- 11 File Copy.
- 12 **US (IFD) DBT with request to re-appropriate an amount of Rs. 3140000.00 this from respective NER Budget**



(Dr. Mohd Aslam)
Adviser/Scientist 'G'

BT/IN/NWO/16/SK/2015-16
 Ministry of Science & Technology
 Department of Biotechnology
 Government of India

Block 2, 8th Floor
 CGO Complex, Lodhi Road
 New Delhi - 110 003
 Dated: 17th September, 2015

ORDER

Sanction of the President is hereby accorded under Rule 18 of the Delegation of Financial Power Rules, 1978 for the implementation of the Joint Research Project titled "Characterising the molecular-physiological basis of pollen abortion upon prolonged high temperature stress" under DBT-NWO, Netherlands Call for proposals on "Crop Sciences: improved tolerance to heat and drought", with Indian investigators as detailed in Para 2.2. Indian components of the project is sanctioned at a total cost of Rs. 150.072 lakhs (Rupees One crore fifty lakhs seven thousand and two hundred only) for a period of 4 years on the terms and conditions as detailed here under:

2.0 The Project

2.1 Project Title : "Characterising the molecular-physiological basis of pollen abortion upon prolonged high temperature stress".

2.2 Investigators

A. Indian Investigators:

- a. Dr. Sanjay Kapoor, Associate Professor, Department of Plant Molecular Biology, University of Delhi, South Campus, New Delhi-PI and coordinator
- b. Professor Anil Groover, Department of Plant Molecular Biology, University of Delhi, South Campus, New Delhi-CO-PI

B. Netherlands Investigators:

- a. Dr. Ivo Rieu, Heijendaalseweg 135, 6525 AJ Nijmegen, The Netherlands.

2.3 Project Objectives:

- i. Determine heat induced changes in phytohormone concentrations (GA, auxin) during tomato and rice another development at elevated temperature.
- ii. Determine the phenotypic and molecular effects of modifications in hormone signaling causing treatments and mutants and transgenic lines of tomato and rice.
- iii. Establish associations between elevated temperature and hormone pathways, AP3, AGO3 and HSP/HSF by tissue-specific transcriptome profiling of another development stages.
- iv. Determine the phenotypic and molecular-physiological effects of tissue-specific over-expression and silencing of AP3, AGO3 and HSP/HSF.
- v. Test the established relations/model in heat sensitive and tolerant varieties of rice and tomato.
- vi. Determine the robustness and generality of our proposed model under field conditions and in other plant species.

2.4 Time Schedule: The duration of the project is four years from the date of financial sanction.

2.5 Manpower: The details of the manpower sanctioned for the implementation of the project are given at Annexure I.

2.6 Equipment's: The details of the equipment sanctioned for the implementation of the project are given at Annexure II.

2.7 Project Cost: The estimated cost for the Indian component of the project for four years is as under:

A. Non-Recurring:

(Rs. in lakhs)

S.No.	Item	Year I	Year II	Year III	Year IV	Total
1.	Equipment's	19.0	--	--	--	19.0
Total A.		19.0	--	--	--	19.0

Contd. 2/A

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Adm

No. BT/PR24637/NER/95/787/2017
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
(NER-BPMC)

App. No.: Agri/2017/14

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi- 110 003
Dated 27/06/2018

ORDER

Sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the implementation of the project entitled: **"Whole Genome and transcriptome changes as a consequence of allo and auto-polyploidy in Vigna L.: Phase II"** for a period of 3 Year 0 Month at a total cost of Rs. **10704980** (Rupees One Crores Seven Lakhs Four Thousand Nine Hundred and Eighty Only) on the terms and conditions detailed here under:-

2 The Project :

2.1 Title : "Whole Genome and transcriptome changes as a consequence of allo and auto-polyploidy in Vigna L.: Phase II"

2.2 Details of the Investigators:

Project Coordinator

Prof. Satyawada Rama Rao

Professor

Department of Biotechnology and Bioinformatics

North-Eastern Hill University

Department of Biotechnology & Bioinformatics,

North-Eastern Hill University,

Shillong 793022, Shillong, Meghalaya, 793022

Principal Investigators:

Mold. Ash

Prof. Satyawada Rama Rao
Professor
Department of Biotechnology and
Bioinformatics
North-Eastern Hill University
Department of Biotechnology &
Bioinformatics,
North-Eastern Hill University,
Shillong 793022,
Shillong, Meghalaya, 793022

Dr. Surekha Katiyar Agarwal
Assistant Professor
Plant Molecular Biology
University of Delhi, South Campus
Department of Plant Molecular
Biology, University of Delhi, South
Campus, Delhi 110021, South
Delhi, Delhi, 110021

Prof. Shailendra Goel
Professor
Botany
University of Delhi, North Campus
Department of
Botany, University of Delhi, North
Campus, Delhi 110007, North
Delhi, Delhi, 110007

CO-PI:

Prof. Arun K Sharma
Professor
Plant Molecular Biology
University of Delhi, South Campus
Department of Plant Molecular Biology,
University of Delhi, Delhi 110021, South Delhi -
110021, Delhi

Prof. Manu Agarwal
Professor
Botany
University of Delhi, North Campus
Department of Botany, University of Delhi,
North Campus, Delhi 110007, North Delhi -
110007, Delhi

Manu Agarwal

2.3 Objectives:

Overall Objectives:

1. • What kind of genomic changes are observed as a result of allopolyploidization and autopolyploidization?
Genomes of diploid parent *V. radiata* have been sequenced and assembled. This sequence will be source of identified loci, which will be compared between diploids and polyploids. Autotetraploid *V. mungo* and *V. radiata* generated by colchicine treatment will be sequenced at 20X level. We will study C0, C1, C2 and C3 generations of autopolyploids. A cross between the two species will be treated with colchicine to generate allopolyploid. This allopolyploid will also be sequenced at 20X level. We will try to include C0 and C1 generations of allopolyploids.
2. • Additive and non-additive changes in gene expression occurring in allopolyploids or autopolyploids. What kinds of genes are showing variation in auto and allopolyploids?
Total RNA extracted by pooling seedling, leaf and flowers will be sequenced in polyploids Illumina based chemistry. At least 15 Gb data will be generated for each of the samples. Digital gene expression will be used to compare the level of transcription between parents and polyploids. Comparing parents and polyploidy expression patterns will identify additive and non-additive expression of genes. We will include C0, C1, C2 and C3 generations of autopolyploids and C0 and C1 generations of allopolyploids to the study.
3. • Comparative small RNAomics of the diploids, *V. mungo* and *V. radiata* and their respective autopolyploids.
Total RNA will be isolated from different tissues such as leaves, flowers, roots and stem and small RNAs libraries will be prepared using Illumina small RNA library preparation kit and sequenced using Illumina NGS platform. Comparative studies will be performed to study the variability in the small RNA expression profile in different tissues of a genotype. Digital gene expression analyses will be carried out to find the abundance of different small RNAs in different genotypes. We will include diploid parents and C0, C1, C2 and C3 generations of autopolyploids in this part of study. If possible we will also try to include C0 and C1 generations of allopolyploids in the study depending on their the availability of allopolyploids.

Institute wise Objectives:

North-Eastern Hill University

1. Maintenance of polyploids and generation advancement - Colchicine treatment by cotton swab method will be used to generate polyploids.
2. Crossing and generation of amphidiploids of *V. mungo* and *V. radiata*
3. Morphological investigations and meiotic studies of parent, autotetraploids and allopolyploids of *V. mungo* and *V. radiata*

University of Delhi, North Campus

1. De novo genome sequencing will be carried out as a concerted effort by all the PIs. The sequencing will be done using the Illumina NGS platform.
2. Sequencing of transcriptome of *V. mungo* autopolyploid will be carried out by PI at Delhi University North Campus
3. Analysis of sequenced data

University of Delhi, South Campus

1. smRNA Sequencing of *Vigna* polyploids - Autotetraploid and allopolyploid

2.4 Time Schedule:

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

2.5 Project Cost:

The total cost of the project is Rs. **10704980/-** (Rupees One Crores Seven Lakhs Four Thousand Nine Hundred and Eighty Only) as per details given below :

Mold. Ashu

Institute	Year I	Year II	Year III	Total Cost(Rs.)
1. North-Eastern Hill University	4208000	1085000	1127996	6420996
2. University of Delhi, North Campus	815000	715000	761992	2291992
3. University of Delhi, South Campus	715000	615000	661992	1991992
Total (Rs.)	5738000	2415000	2551980	10704980

Institute wise details are:

Budget Head	Year I	Year II	Year III	Total(Rs.)
1. North-Eastern Hill University				
Equipment	2598000.00			2598000.00
Manpower	360000.00	360000.00	402996.00	1122996.00
Consumables	1000000.00	500000.00	500000.00	2000000.00
Contingency	50000.00	50000.00	50000.00	150000.00
Travel	50000.00	50000.00	50000.00	150000.00
Overhead	150000.00	125000.00	125000.00	400000.00
Total (Rs.)	4208000.00	1085000.00	1127996.00	6420996.00
2. University of Delhi, North Campus				
Manpower	390000.00	390000.00	436992.00	1216992.00
Contingency	10000.00	10000.00	10000.00	30000.00
Travel	15000.00	15000.00	15000.00	45000.00
Consumables	400000.00	300000.00	300000.00	1000000.00
Total (Rs.)	815000.00	715000.00	761992.00	2291992.00
3. University of Delhi, South Campus				
Manpower	390000.00	390000.00	436992.00	1216992.00
Consumables	300000.00	200000.00	200000.00	700000.00
Contingency	10000.00	10000.00	10000.00	30000.00
Travel	15000.00	15000.00	15000.00	45000.00

Mold. Ahe

Total (Rs.)	715000.00	615000.00	661992.00	1991992.00
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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:

Mold. Ad.

Demand No. 85	Department of Biotechnology
3425	Other Scientific Research 2018-2019
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.35	Grants for creation of capital assets

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

Demand No. 85	Department of Biotechnology
3425	Other Scientific Research 2018-2019
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.31	Grants-in-Aid General

4. Terms & Conditions:

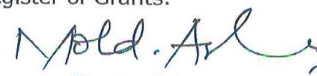
Additional Terms and Conditions specific for Twinning R and D program for NER:

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

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

M. S. Ad

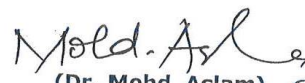
- 4.2A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institution on Non-Judicial stamp paper Rs. 100/- in the enclosed format and the second release/installment will be made only after signing of MoA by the grantee institutions and its acceptance by DBT. In case of NGO or Private Institution, MOA signed is mandatory first release. A format of the MoA is enclosed in Annexure-IV
- 4.3 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 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 Prof. Umesh Rai, University of Delhi, South Campus, South Delhi, Delhi and The Registrar, North-Eastern Hill University, Shillong, Meghalaya and The Registrar, University of Delhi, North Campus, Delhi, Delhi would be responsible for submission of Statements of Expenditure (SoE), utilization certificates (UC), Assets Certificates, Manpower staffing & expenditure details in prescribed DBT formats to DBT in respect of grants released in this project from time to time.
- 7.PI's of DBT sponsored projects can consider appointment of JRF from Category-II merit list of DBT-BET exam so that candidates can be paid fellowships at par with NET/GATE/BET qualified candidates as per DST OM No. A.SR/S9/Z-09/2012 dated on 21 Oct 2014. However, there is no compulsion on PI's to select candidates for JRF in their projects from Category-II of DBT-BET.
- 8.As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organisations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provision of CAG(DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organisation is called upon to do so.
- 9.If the Research Project involves biological resource, the obligations under the Biological Diversity Act 2002 as applicable shall be complied with by the Project Investigator, the details of such obligations can be accessed at www.nbaindia.org
- 10.This issues under the power delegated to this Department and with the concurrence of IFD vide their SAN No. ~~102/IFD/SAN/581/2018-2019~~ dated **May, 29 2018**.
- 11.This sanction order has been noted at serial no. 76-77 in the Register of Grants.


(Dr. Mohd Aslam)
Adviser/Scientist 'G'

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 Prof. Satyawada Rama Rao(Project Co-ordinator), Prof. S. Rama Rao, Professor and Head, Department of Biotechnology & Bioinformatics, North-Eastern
- 3 The Director, University of Delhi, South Campus, New Delhi, Delhi 110021, South Delhi - 110021, Delhi
- 4 The Registrar, North-Eastern Hill University, P.O: NEHU Campus, Mawkynroh Umshing,, Shillong - 793022, Meghalaya
- 5 The Registrar, University of Delhi, North Campus, , Delhi - 110007, Delhi
- 6 Dr. Surekha Katiyar Agarwal, Assistant Professor, Plant Molecular Biology, University of Delhi, South Campus, Department of Plant Molecular Biology, University of Delhi, South Campus, Delhi 110021, South Delhi - 110021, Delhi
- 7 Prof. Arun K Sharma, Professor, Plant Molecular Biology, University of Delhi, South Campus, Department of Plant Molecular Biology, University of Delhi, Delhi 110021, South Delhi - 110021, Delhi
- 8 Prof. Manu Agarwal, Professor, Botany, University of Delhi, North Campus, Department of Botany, University of Delhi, North Campus, Delhi 110007, North Delhi - 110007, Delhi
- 9 Prof. Satyawada Rama Rao, Professor, Department of Biotechnology and Bioinformatics, North-Eastern Hill University, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong 793022, Shillong - 793022, Meghalaya
- 10 Prof. Shailendra Goel, Professor, Botany, University of Delhi, North Campus, Department of Botany, University of Delhi, North Campus, Delhi 110007, North Delhi - 110007, Delhi
- 11 Cash Section, DBT (2 copies).
- 12 Sanction Folder.
- 13 File Copy.


(Dr. Mohd Aslam)
Adviser/Scientist 'G'

Annexure -I

Details of the Equipment sanctioned for the implementation of the project titled "**Whole Genome and transcriptome changes as a consequence of allo and auto-polyploidy in Vigna L.: Phase II**":

North-Eastern Hill University			
SNo.	Name of Equipment	No.	Cost(Rs.)
1.	Beckmann Coulter-Biomek 4000 Liquid Handling system	1	2598000.00
Total			2598000.00

Mohd. Aslam
(Dr. Mohd Aslam)
Adviser/Scientist 'G'

Annexure -II

Details of the manpower sanctioned for the implementation of the project titled "Whole Genome and transcriptome changes as a consequence of allo and auto-polyploidy in Vigna L.: Phase II":

Head	No. of Position	Year I	Year II	Year III	Total (Rs.)
1. North-Eastern Hill University					
Junior Research Fellow for carrying out project work	1	360000.00	360000.00		720000.00
Senior Research Fellow for carrying out project work	1			402996.00	402996.00
Total(Rs.)		360000.00	360000.00	402996.00	1122996.00
2. University of Delhi, North Campus					
Junior Research Fellow Manpower + 30% HRA	1	390000.00	390000.00		780000.00
Senior Research Fellow Manpower + 30% HRA	1			436992.00	436992.00
Total(Rs.)		390000.00	390000.00	436992.00	1216992.00
3. University of Delhi, South Campus					
Junior Research Fellow for carrying out project work	1	390000.00	390000.00		780000.00
Senior Research Fellow for carrying out project work	1			436992.00	436992.00
Total(Rs.)		390000.00	390000.00	436992.00	1216992.00

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-09/2012 dated 21.10.2014.


 (Dr. Mohd Aslam)
 Adviser/Scientist 'G'

SCIENCE & ENGINEERING RESEARCH BOARD(SERB)

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

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

Dated: 13-Mar-2018

ORDER

Subject: Financial Sanction of the research project titled "**Unravelling the interactome of tetraspanin protein, a novel regulator of abiotic stress tolerance in rice.**" under the guidance of Dr. Surekha Katiyar Agarwal, Plant Molecular Biology, University of Delhi, South Campus, New Delhi, Delhi, New Delhi, Delhi-110021 and by Prof. Arun Kumar Sharma, Professor, Plant Molecular Biology, University Of Delhi, South Campus - Release of 1st grant.

Sanction of **Science and Engineering Research Board (SERB)** is hereby accorded to the above mentioned project at a total cost of **Rs. 3740000/- (Rs. Thirty Seven Lakh Forty Thousand Only)** with break-up of **Rs. 1000000/- under Capital (Non-recurring) head** and **Rs. 2740000/- under General (Recurring) head** for a duration of 36 months. The items of expenditure for which the total allocation of **Rs. 3740000/-** has been approved are given below:

The following budget may be considered for **University Of Delhi, South Campus, New Delhi, Delhi**

S. No	Head	Total (in Rs.)
A	Non-recurring	
1	Equipment -> Incubator -> Gradient PCR machine -> UV Transilluminator	1000000
A'	<i>Total (Non-Recurring)</i>	1000000
B	Recurring Items	
1	Recurring - A : (Manpower) Recurring - B : (Consumables, Travel, Contingencies)	2400000
2	Recurring - C : (Overhead Charges)	340000
B'	<i>Total (Recurring)</i>	2740000
C	Total cost of the project (A' + B')	3740000

- Sanction of the **SERB** is also accorded to the payment of
 - Rs. 1000000/-** (Rupees Ten Lakh only) under 'Grants for creation of capital assets' and **Rs. 913300/-** (Rupees Nine Lakh Thirteen Thousand Three Hundred only) under 'Grants-in-aid General' to **Director, University of Delhi South Campus, University Of Delhi, South Campus, New Delhi, Delhi** being the first installment of the grant for the year 2017-2018 for implementation of the said research project.
- The expenditure involved is debitable to **Fund for Science & Engineering Research (FSER)**
This release is being made under Core Research Grant. (PAC Plant Sciences)
- The Sanction has been issued to University Of Delhi, South Campus, New Delhi, Delhi with the approval of the competent authority under delegated powers on **12 March, 2018** and vide Diary No. **SERB/F/10332/2017-2018** dated **12 March, 2018**
- Sanction of the grant is subject to the conditions as detailed in Terms & Conditions available at website (www.serb.gov.in).
- Overhead expenses are meant for the host Institute towards the cost for providing infrastructural facilities and general administrative support etc. including benefits to the staff employed in the project.
- While providing operational flexibility among various subheads under head Recurring-A, it should be ensured that not more than Rs. 1.5 lakh each should be spent for travel and contingency.
- 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.

9. The sanctioned equipment would be procured as per GFR and its disposal of the same would be done with prior approval of SERB.

10. The release amount of Rs. 1913300/- (Rupees Nineteen Lakh Thirteen Thousand Three Hundred 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:

Account Name	Director, University of Delhi South Campus
Account Number	10043546386
Bank Name & Branch	State Bank of India South Campus, Delhi University, New Delhi University of Delhi South Campus, Benito Juarez Road, New Delhi 110021
IFSC/RTGS Code	SBIN0008778
Email id of A/C Holder	dir_udsc@du.ac.in
Email id of PI	katiyarsurekha@gmail.com

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

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

13. The project File no. EMR/2016/006200 may also be mentioned in all research communications arising from the above project with due acknowledgement of SERB.

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

15. As this is the first grant being released for the project, no previous U/C is required.

16. 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.

17. 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.

18. 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.

Shilpi Paul

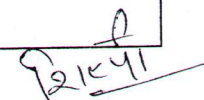
(Dr. Shilpi Paul)
Scientist E
ms_ps@serbonline.in

To,
Under Secretary
SERB, New Delhi

Copy forwarded for information and necessary action to: -

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

4.	<p>Dr. Surekha KatiyarAgarwal Plant Molecular Biology University of Delhi, South Campus , New delhi, delhi, New delhi, Delhi-110021 Email: katiyarsurekha@gmail.com Mobile: 919971963915</p> <p>Prof. Arun Kumar Sharma Plant Molecular Biology University Of Delhi, South Campus (Start date of the project may be intimated by name to the undersigned. For guidance, terms & Conditions etc. Please visit www.serb.gov.in.)</p>
5.	<p>Director, University of Delhi South Campus, University Of Delhi, South Campus, New Delhi, Delhi</p> <p>(Receipt of Grant may be intimated by name to the undersigned)</p>


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



Barkha Ravi <barkharavi@south.du.ac.in>

Congratulations! Invitation to UPSC Symposium for Early Career Plant Scientists

Laura Bacete Cano <laura.bacete@umu.se>

Thu, May 4, 2023 at 8:45 PM

To: "barkharavi@south.du.ac.in" <barkharavi@south.du.ac.in>

Cc: Stéphane Verger <stephane.verger@umu.se>, Petra Marhava <petra.marhava@slu.se>, Anne Honsel <anne.honsel@slu.se>

Dear Barkha Ravi,

Congratulations! You have been selected as a speaker at the Symposium for Early Career Plant Scientists! We have received 46 applications from highly-skilled early career scientists from around the globe, and yours stood out. We are delighted to welcome you to Umeå, Northern Sweden, on June 1-2, 2023. You will receive further information about arranging your travel soon.

If you are unable to attend, please do let us know as soon as possible. There are individuals on the waiting list, and we will need to inform them if a place becomes available.

Yours sincerely,

Petra, Stéphane and Laura
Selection Committee

Laura Bacete, PhD
Biträdande Universitetslektor (BUL) – Assistant Professor
Umeå Plant Science Centre
Department of Plant Physiology
Umeå University
90187 Umeå
Sweden



Mr. Ketan V. Thorat
Scientist- C
Email: icone@dbt.nic.in

भारत सरकार
विज्ञान और प्रौद्योगिकी मंत्रालय
बायोटेक्नोलॉजी विभाग
ब्लॉक-2, 7वां तल, सी0 जी0 ओ0 कम्प्लेक्स
लोधी रोड, नई दिल्ली-110003
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
Block-2, 7th Floor, C.G.O. Complex
Lodhi Road, New Delhi-110003

F.No. BT/IN/UK/DBT-BC/2019-20

Dated: 07th January, 2020

Subject: Intimation of your selection for Newton Bhabha PhD Placement Programme for the year 2019-20 coordinated by Department of Biotechnology, Government of India and British Council, UK – regarding.

Dear Ms. Barkha Ravi,

I am pleased to inform that your application submitted under Newton Bhabha PhD Placement Programme for the year 2019-20 has been recommended by the India- UK Joint Panel for Short-Term PhD Placement (for 02-04 months) at Universities/ Institutes in UK.

2. Based on your submission, your candidature for short term PhD Placement has been recommended for:

Host Institute	Host Supervisor
University of Birmingham	Dr. Christine Foyer

3. **The placement should be undertaken between 01st March 2020 to 31st December 2020.**
4. For Short-Term PhD Placement mutually agreed payments shall be made by the respective agencies as detailed below:
- a) **Department of Biotechnology, Government of India:**
- To and fro (India to UK to India) travel by shortest route through Air India in economy class.
 - Visa fee (type III), overseas travel insurance and airport transfer expenses in India (on agreed cost as per Government of India norms).
- b) **British Council, UK:**
- Monthly Stipend (to cover meals, accommodation and domestic travel etc.) and bench fee (if any).
5. The following points must be noted for the visit:
- a) You must inform your Host Institute in UK that you have been awarded the Newton Bhabha PhD placement and also that you wish to confirm your visit. The Department of Biotechnology shall not inform your Host institute.
- b) Please address any questions you may have regarding the practical arrangements for your visit to your host institution.

Contd.2/-

- c) In no case, the change in the total duration of stay shall be allowed. If you stay more than the permitted period, no grant for that excess period shall be reimbursed by the Department.
- d) After completion of your research work with the host institute, you shall require to submit audited UC/SE, original vouchers & receipts of local & air travel, original boarding passes, explicit work report (max. 5 pages) and completion certificate duly endorsed by host supervisor to the Department of Biotechnology within one month, post completion of placement period.
- e) Duly authenticated financial documents are required for final settlement of accounts as per Government of India norms. Please note that settlement of account after successful completion of the placement shall remain the responsibility of the Awardee.
- f) You must also inform us immediately about any changes in your contact and email address. We send all information regarding your grant mainly by email.
6. Kindly communicate the following information within 20 days from the receipt of this Award letter:
- Acceptance of the host institute from UK indicating duration of the placement and non technical support to be extended during your placement.
 - Acceptance of the offer from your side.
 - Duly authenticated endorsement from your current Supervisor and Head of Institution/ Registrar of the University, along with an undertaking stating that you would comply with the terms and conditions of Newton Bhabha PhD Placement Programme.
 - Bank details of home institute as per the Proforma enclosed.



Mr. Ketan V. Thorat

Scientist- C
KETAN VILAS THORAT
Scientist 'C'
Department of Biotechnology
Govt. of India
C.G.O. Complex, Lodhi Road
New Delhi-110003

To,

Ms. Barkha Ravi,
Department of Plant Molecular Biology,
University of Delhi South Campus,
New Delhi-110021, India

Copy to:

1. Registrar, University of Delhi South Campus, New Delhi-110021, India
2. Dr. Girdhar Pandey, Department of Plant Molecular Biology, University of Delhi South Campus, New Delhi-110021, India
3. Ms. Purti Kohli, British Council, Delhi
4. File



Barkha Ravi <barkharavi@south.du.ac.in>

SERB-Notification

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

Thu, May 26, 2022 at 10:16 AM



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

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

File Number: ITS/2022/000998

Dated: 26-May-2022

To
Ms. BARKHA RAVI,
University Of Delhi, South Campus , New Delhi, Delhi, New Delhi, Delhi-110021

Subject: Financial Assistance to Ms. BARKHA RAVI for participating in "**Plant Calcium Signaling Conference , Italy (11 July, 2022 to 13 July, 2022)**"

Sir/Madam

We are happy to inform you that your application seeking financial grant to attend the above mentioned international scientific event has been recommended for support by the Science and Engineering Research Board (SERB). **We will provide to and fro economic class air-fare by the shortest route, airport tax , visa fees & registration fees.** It is hoped that the support will give you an opportunity to interact with leading international experts in the area. The support, however, is subject to the following conditions.

1. You should not have received financial support during the last three years under this scheme.
2. The air tickets are to be booked in economy class at "**Lowest Available Fare**" on the date of booking. It may be noted that rescheduling/cancellation charges will not be reimbursed.
3. SERB is directed to instruct the applicant to purchase the air tickets either of these two Govt. authorized travel agents viz. i) M/s Balmer Lawrie & Company Limited (BLCL) and ii) M/s Ashok Travels & Tours (ATT). In case of failure of adherence to this guideline, air fare will not be reimbursed.
4. The candidate availing ITS must have to submit the certificate for "**Lowest Available Fare**" at the time of reimbursement..
5. The signed print copy of Claim Form along with the original Boarding passes and other relevant documents must be sent to the SERB immediately after completing the online Claim Form to the following address.

ITS Section

3rd & 4th Floor, SERB Block II

Technology Bhavan, New Mehrauli Road

New Delhi 110016

6. The account details must be in the format available at the home page of the online portal in the format section and it must be endorsed by the competent authority of the institute/university.
7. SERB will reimburse the grant after deducting the financial assistance received from any other sources, if any.
8. All other expenses such as per diem, taxi fare etc. will not be reimbursed by SERB.
9. You will have to make your own arrangements for foreign exchange required for the purpose.
10. You will not be treated as a delegate sponsored by the Government of India.
11. We request you to either accept or decline this offer at the earliest online. On acceptance only, you will be able to submit the Claim Form. Please note that once you decline this offer, it will be assumed that you are not interested in availing this offer and no further communication will be entertained in this matter.
12. You must submit Claim Form and other relevant documents online within 90 days of the Last Date of the Event, failing which SERB will not reimburse the Travel Grant.
13. If any candidate found to have furnished incorrect / misleading information at any stage, his/her candidature will be cancelled and no reimbursement will be made. The candidate will also be debarred for next three years for availing support under this scheme.

Disclaimer:

1. Financial support will be provided for physical attendance in the event. No support will be provided in case of online/web attendance.
2. No financial support will be provided other than approved items as mentioned above. SERB will not be responsible to bear any other cost borne by the candidate.

With kind regards,

 UserImage

(Dr. Sukumar Dey)

Scientist C

Ph: Ph: 01126511084

Email: dey.sukumar@serb.gov.in

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