

ORDER

Subject: Support under CRS for the project "Development and promotion of local fungal strains of tea ecosystem for the management of tea pathogens and insect pests with special reference to Darjeeling: An Innovative Non Chemical Approach" Sanction of the Competent Authority is hereby accorded for implementation of the project entitled at a total cost of Rs.72.00 Lakhs (Seventy Two Lakhs only).

BIRAC's total Grant in Aid to the followings is as follows:

Total Project Cost	:	Rs. 72.00 lakhs	✓
Academia (Tea Research Association) Grant-in-aid	:	Rs. 34.00 lakhs	✓
Industry Partner(Varsha, Nalgonda) Grant-in-aid	:	Rs.38.00 lakhs	✓

The terms and conditions are detailed hereunder.

The designated Project Coordinator from the Academia is:

Dr. AzariahBabu,
Deputy Director (Research)&(Sr. Principal Scientist),
Tea Research Association,
North Bengal Regional R & D Centre Nagarkatta-735225,
Jalpaiguri District, West Bengal
Email: a.babu@tocklai.net; azariah.babu@gmail.com

Contract Research key Investigator(s)

Industry Partner

Dr. Arulmariamathan John Peter,
R & D Chief,
Varsha Bioscience and Technology (India)Private Limited
253/A, Jiblakpally Village, Pochampally Mandal
Nalgonda-508284 (A.P)
Email: vbtipl@gmail.com

1. Objectives/Specific aims:

Main objectives:

- In-Vivo demonstration of bio efficacy ofthree organism (Trichoderma, Beauvaria and Metarhizium) produced at twenty liter scale fermenter and then testing them at multi location at different ecological zone.
- To develop large scale formulation in collaboration with the commercial partner (based on first objectives). Study of its self-life, temperature tolerance through in vivo trials.
- Testing of selected strains will be done for CIB (Central Insecticide Board) registration including multilocation trials and generation of toxicological data at GLP grade.

2. Duration: 36 Months

Date of start of the project will be date of signing of Agreement

3. Project Cost:

In figures: Rs. 72.00 Lakhs

In Words: Seventy Two Lakhs only

Rs in Lakhs

Budget Head	Academia (Tea Research Association) (in Lakhs)	Collaborator (Varsha) (in Lakhs)	Total (Grant-in-Aid) (in Lakhs)
Non-recurring	13.60	0.00	13.60
Recurring	20.40	38.00	58.40
Total	34.00	38.00	72.00

Detailed budget is given as Annexure 1

4. Objectives and time lines: PG. 181

Timelines		
Sr. No.	Objective	Timeline (in months)
1.	In- vivo demonstration of bio efficacy of three organism (<i>Trichoderma</i> , <i>Beauveria</i> and <i>Metarhizium</i>) produced at twenty liter scale fermenter and then testing them at multi location at different ecological zone. This also includes establishing the genetic identity of isolates.	0-12
2.	To develop large scale formulation in collaboration with the commercial partner (based on first objective). Study of its self-life, temperature tolerance through in vivo and in vitro trials.	12-24
3	Testing of selected strains will be done for CIB (Central Insecticide Board) registration including multilocation trials and generation of toxicological data at GLP grade	24-36

5. The Milestones for payment are:

S. No.	Milestone Name	Month of End of Activity (in months)	Tea Research Association, Nagarkata (Rs. in Lakhs)	Varsha Bioscience and Technology (India) Private Limited (Rs. in Lakhs)	Role of the Academia and its industry partner

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1.	Signing of contract	0	20.10	1.50	
2.	Scaling up of lab level to 20 L fermentation. In vivo multi location/ecological zones trials of the formulations developed from 20 L fermenters	12	6.94	7.46	Academia
3.	Upscaling of 20 L fermentation to 800 liters. Generation of the data on efficacy of the formulated product over a period of time and the temperature tolerance	24	6.75	7.65	Academia and Industry
4.	Generation of data for CIB registration (multi location and toxicity data) under GLP	34	0.00	14.40	Academia and Industry
5.	Submission of final Report	36	0.21	6.99	Academia
6.	Total Rs in Lakhs		34.00	38.00	Academia and Industry

6. Other Terms & Conditions:

First installment will be released on signing of the Agreement by all the parties. A copy of the agreement to be signed is enclosed at Annexure-2. Release of the further installments will be subjected to review of the progress in the project.

- The expenditure is debitable to "BIRAC-CRS Account" Budget Head BIRAC B.07.001 for financial year 2014-2015.
- The Implementing Organizations will maintain separate auditable accounts for the project and keep the grant in a separate interest bearing account. The interest so earned should be reported to BIRAC.
- The Implementing organizations would submit to BIRAC the utilization certificate (UC), Statement of Expenditure (SE) and asset acquired certificate duly audited by competent authority pertaining to the fund released. A consolidated UC/SE would be due immediately after the end of each financial year.
- The Accounts of Grantee Implementing Organization shall be open to inspection by the sanctioning authority/ audit as per the rule 150 (1) of GFR 15 (A). The accounts are liable and shall be open to inspection by BIRAC.

B07001/91/2014-15

11. These issues with the approval of Competent Authority Sanction Order No dated 8/1/15
12. The order has been noted at page no. 92 in the grant registrar.

Dr. Amita Joshi
Dr Amita Joshi
Manager Technical
05/01/2015

To

1. Project Coordinator
Dr. Azariah Babu,
Deputy Director (Research) & (Sr. Principal Scientist),
Tea Research Association,
North Bengal Regional R & D Centre Nagarkatta -735225,
Jalpaiguri District, West Bengal
Email: a.babu@tocklai.net; azariah.babu@gmail.com
2. **Contract Research Key Investigator:**
Industry Partner
Dr. Arulmarianathan John Peter
R & D Chief
Varsha Bioscience and Technology (India) Private Limited
#253/A, Jiblakpally village, Pochampally Mandal
Nalgonda-508284 (A.P.) vbtipl@gmail.com

Copy To

1. BIRAC Finance
2. Sanction Folder Manager (Accounts and Admin)

Budget Particulars for TEA RESEARCH ASSOCIATION

Annexure 1A

A. Non - Recurring

Sl. No.	Item	Total (Rs. in Lakhs)
1	Compound microscope with photographic accessories	2.5
2	BOD Incubator(NSW)	1.5
3	-Fementor 25L capacity (for Entomopathogen)	2.5
4	Fementor 25 l capacity(for Antagonist)	2.5
5	Drier	0.85
6	Autoclave Bigger	01.5
7	Hot Air Oven (NSW)	0.75
	minor equipments	
8	digital balance	1.00
9	pH meter	0.25
10	hot water bath	0.25
Total		13.6

B. Recurring

Sl. No.	Item	Total (Rs. in Lakhs)
1	Manpower Junior Research Fellow- Two Number (Rs 16000 plus 10% HRA / month for initial 2 year and Rs 18000 plus 10% HRA for 3rd year)	13.20
2.	out-sourcing (DNA Finger Printing)	1.20
3	Travel	3.00
4	Contingencies	3.00
Total		20.40

Grand Total (A+B) = Rs. 34.00 lakhs

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Budget Particulars for VARSHA

Recurring

Sl. No.	Item	Total (Rs. in Lakhs)
1	Manpower	4.49
2.	Consumables and Contingency	6.00
3	Travel	2.50
4	Toxicological study	25.01
Total		38.00