

Admin

No. F /NER/95/SP42584/2021  
GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE & TECHNOLOGY  
DEPARTMENT OF BIOTECHNOLOGY  
(NER-BPMC)

Block 2, 6-8th Floors  
CGO Complex, Lodhi Road,  
New Delhi- 110 003  
Dated: 30/03/2021

**ORDER**

Sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the implementation of the project entitled: **"Predator Prey Interactions: Chemical defense in Hemiptera: Pentatomidae bug (the gondhi bug) and its glandular secretions."** for a period of 3 Year 0 Month at a total cost of Rs. **11520680** (Rupees One Crores Fifteen Lakhs Twenty Thousand Six Hundred and Eighty Only) on the terms and conditions detailed here under:-

**2 The Project :**

**2.1 Title :** "Predator Prey Interactions: Chemical defense in Hemiptera: Pentatomidae bug (the gondhi bug) and its glandular secretions."

**2.2 Details of the Investigators:**

**Project Coordinator**

**Dr. Jharna Chakravorty**

Professor

RAJIV GANDHI UNIVERSITY

University Road, Papum Pare, Arunachal Pradesh 791112

**Principal Investigators:**

**Dr. DHIRAJ DEVIDAS BHATIA**

Assistant Professor

BIOLOGICAL ENGINEERING

INDIAN INSTITUTE OF

TECHNOLOGY, GANDHINAGAR

Gujarat, 382330

**Dr. Jharna Chakravorty**

Professor

Zoology

RAJIV GANDHI UNIVERSITY

University Road, Papum Pare, Arunachal Pradesh

791112, Itanagar, Arunachal Pradesh

**Prof. Sowdhamini Ramnathan**

Professor

Biophysics Biochemistry and Bioinformatics

NCBS-TIFR, GKVK-UAS, Bellary Road,

Bangalore, Bangalore, Karnataka, 560065

Vairaleh

डॉ. वैशाली पंजाबी / Dr. VAISHALI PANJABI

वैज्ञानिक 'ई' / Scientist 'E'

बायोटेक्नोलॉजी विभाग / Department of Biotechnology

विज्ञान और प्रौद्योगिकी, मंत्रालय / Ministry of Science & Tech.

भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

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Dr. Jharna Chakravorty  
Department of Zoology  
Rajiv Gandhi University  
Rono Hills, Itanagar-791112

कुलसचिव  
राजिव गांधी विश्वविद्यालय  
Registrar  
Rajiv Gandhi University  
Rono Hill, Doimukh (A.P.)

**CO-PI:**

**Dr. Karsing Megu**

Assistant Professor

Zoology

Dera Natung Government College, National Highway, Itanagar - 791113, Arunachal Pradesh

**Dr. Tusha Sharma**

Scientist

Scientific and Industrial Research

Iladevi Cataract & IOL Research Centre

Gurukul Rd, near Shreeji Complex, Nilmani

Society, Memnagar, Ahmedabad, Gujarat

380052, Ahmedabad - 380052, Gujarat

**2.3 Objectives:**

**Overall Objectives:**

1. Detailed investigation of secondary metabolites of host plant: categorization of plant derived defence chemicals along with their potential role as chemical defences against herbivores, (the gondhi bug). – RGU
2. Investigation on gondhi bug : plant-derived defences in the bug and composition of VOC. – RGU
3. Analysis of defensive secretion produced by exocrine glands of gondhi bug by correlating structure-action-relations (SAR studies) – RGU / NCBS / IITGN
4. Analysis of pheromonal activity for predatory stink bug – RGU / NCBS / IITGN
5. Characterization and applications of hallucinogens and VOC among the identified compounds. Bioinformatic analysis to identify the metabolic pathways of identified hallucinogens.- NCBS / IITGN / RGU

**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. **11520680/-**(Rupees One Crores Fifteen Lakhs Twenty Thousand Six Hundred and Eighty Only) as per details given below :

*Vaishali*

डॉ. वैशाली पंजाबी / Dr. VAISHALI PANJABI

वैज्ञानिक 'ई' / Scientist 'E'

बायोटेक्नोलॉजी विभाग / Dept. of Biotechnology

विज्ञान और प्रौद्योगिकी, मंत्रालय / M/o Science & Tech.

भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

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*Dr. Tusha Sharma*  
22.04.21  
Prof. Tusha Sharma  
Department of Zoology  
Rajiv Gandhi University  
Rono Hills, Itanagar-791112

*[Signature]*  
रजिव गांधी विश्वविद्यालय  
Registrar  
Rajiv Gandhi University  
Rono Hill, Doimukh (A.P.)



| Institute                                      | Year I         | Year II        | Year III       | Total Cost(Rs.) |
|--|----------------|----------------|----------------|-----------------|
| 1. INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR | 771520         | 671520         | 727200         | 2170240         |
| 2. National Centre For Biological Sciences     | 814360         | 804360         | 804360         | 2423080         |
| 3. RAJIV GANDHI UNIVERSITY                     | 2359120        | 2284120        | 2284120        | 6927360         |
| <b>Total (Rs.)</b>                             | <b>3945000</b> | <b>3760000</b> | <b>3815680</b> | <b>11520680</b> |

Institute wise details are:

| Budget Head   | Year I            | Year II           | Year III          | Total(Rs.)        |
|---|-------------------|-------------------|-------------------|-------------------|
| <b>1. RAJIV GANDHI UNIVERSITY</b>                     |                   |                   |                   |                   |
| Manpower  | 609120.00         | 609120.00         | 609120.00         | 1827360.00        |
| Consumables   | 100000.00         | 100000.00         | 100000.00         | 300000.00         |
| Contingency   | 50000.00          | 75000.00          | 75000.00          | 200000.00         |
| Overhead  | 200000.00         | 200000.00         | 200000.00         | 600000.00         |
| Travel  | 200000.00         | 200000.00         | 200000.00         | 600000.00         |
| Other - Sample sampling, collection charges - NER     | 1200000.00        | 1100000.00        | 1100000.00        | 3400000.00        |
| <b>Total (Rs.)</b>                                    | <b>2359120.00</b> | <b>2284120.00</b> | <b>2284120.00</b> | <b>6927360.00</b> |
| <b>2. National Centre For Biological Sciences</b>     |                   |                   |                   |                   |
| Manpower  | 699360.00         | 699360.00         | 699360.00         | 2098080.00        |
| Overhead  | 10000.00          | 10000.00          | 10000.00          | 30000.00          |
| Contingency   | 30000.00          | 20000.00          | 20000.00          | 70000.00          |
| Computational Charges at NCBS                         | 75000.00          | 75000.00          | 75000.00          | 225000.00         |
| <b>Total (Rs.)</b>                                    | <b>814360.00</b>  | <b>804360.00</b>  | <b>804360.00</b>  | <b>2423080.00</b> |
| <b>3. INDIAN INSTITUTE OF TECHNOLOGY, GANDHINAGAR</b> |                   |                   |                   |                   |
| Manpower  | 431520.00         | 431520.00         | 487200.00         | 1350240.00        |
| Overhead  | 10000.00          | 10000.00          | 10000.00          | 30000.00          |
| Travel  | 20000.00          | 20000.00          | 20000.00          | 60000.00          |
| Consumables   | 300000.00         | 200000.00         | 200000.00         | 700000.00         |
| Contingency   | 10000.00          | 10000.00          | 10000.00          | 30000.00          |
| <b>Total (Rs.)</b>                                    | <b>771520.00</b>  | <b>671520.00</b>  | <b>727200.00</b>  | <b>2170240.00</b> |

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डॉ. वैशाली पंजाबी / Dr. VAISHALI PANJABI  
वैज्ञानिक 'E' / Scientist 'E'  
बायोटेक्नोलॉजी विभाग / Department of Biotechnology  
विज्ञान और प्रौद्योगिकी विभाग / Department of Science & Tech.  
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

Prof. Anurag Chakraverty  
Department of Zoology  
Rajiv Gandhi University  
Rono Hills, Itanagar-791112

मुख्य अधिकारी  
राजीव गांधी विश्वविद्यालय  
Registrar  
Rajiv Gandhi University  
Rono Hill, Dolimukh (A.P.)