

**INSTITUTE TECHNOLOGY MANAGEMENT COMMITTEE
NATIONAL BUREAU OF AGRICULTURALLY IMPORTANT INSECTS
BANGALORE**

Date: 19.03.2020

Proceedings of the ITMC meeting

The ITMC meeting was held on 19th March 2020 at 11 AM in the conference hall, ICAR-NBAIR and the following members were present. The Director, ICAR-NBAIR welcomed the members of ITMC.

ITMC Committee

Dr. Chandish R. Ballal	: Director & Chairperson
Dr. Sudha Mysore	Pr. Scientist & External expert, ICAR-IIHR & CEO, AgriInnovate, New Delhi
Dr. T. Venkatesan	: Pr. Scientist & Member Secretary, ITMC
Dr. N. Bakthavatsalam	: Pr. Scientist and In-Charge, Germplasm Conservation and Utilization
Dr. M. Nagesh	: Pr. Scientist & In-charge, Head, Div. of Genomic resources
Dr. Sunil Joshi	: Pr. Scientist & In Charge, Head of Div. of Germplasm Collection and Characterization

Agenda-I: Invention disclosures by Dr. G. Sivakumar, Principal Scientist (Microbiology) & Inventor

1. **Dr. G. Sivakumar, Principal Scientist & Inventor** presented a technology on "Aqueous formulation of *Spodoptera frugiperda* nucleopolyhedrovirus (SpfrNPV-NBAIR-1) NBAIR strain for the management of FAW" for technology transfer/commercialization and the following are the Co-Inventors of the Technology.
Dr. M. Mohan, Principal Scientist (Entomology) & Co-Inventor, ICAR-NBAIR
Dr. Chandish R. Ballal, Director & Co-Inventor, ICAR-NBAIR,
Dr. T. Venkatesan, Principal Scientist (Entomology) & Co-Inventor, ICAR-NBAIR
Dr. Mahesh, S. Yandigiri, Senior Scientist (Microbiology) & Co-Inventor, ICAR-NBAIR.

Recommendation by the committee

The committee approved the technology in principle, however, they suggested going for the commercialization after generating toxicology data. They also recommended for the possibility of emergency registration for the product with CIBRC. The committee also suggested to explore the availability of toxicology data available anywhere for the particular product and the same may be used for the registration with CIBRC keeping in view of the management of the invasive pest.

2. **Dr. G. Sivakumar, Principal Scientist & Inventor** presented another technology on "Bioformulation of *Bacillus subtilis* strain NBAIR BS1 for growth promotion in Biotic stressed Tea plantation" for technology transfer/commercialization,

1. Dr. S.K. Jalali, Principal Scientist & Head (Retd.) & Co-Inventor, ICAR-NBAIR
2. B. RadhaKrishnan, Director & Co-Inventor, UPASI, Valparai
3. Dr. S.P. Mahendran, Scientist & Co-Inventor, UPASI, Valparai
4. Dr. T. Venkatesan, Principal Scientist (Entomology) & Co-Inventor, ICAR-NBAIR
5. Dr. M. Mohan, Principal Scientist (Entomology) & Co-Inventor, ICAR-NBAIR

Recommendation by the committee

The committee approved and recommended the technology for further commercialization. The committee suggested to register the strain with FCO and seek the consent from NTRF, Kolkata before commercialization. The committee fixed Rs. 1.0 (one lakh only) plus GST as applicable for the commercialization of the technology.

Agenda-II: Invention disclosure by Dr. B. Ramanujam, Principal Scientist & Inventor

Dr. Ramanujam presented a technology on "*Metarhizium anisopliae* ICAR-NBAIR Ma 35 for management of Fall armyworm *Spodoptera frugiperda* in Maize for commercialization and the following are the Co-Inventors of the technology

1. Dr. M. Vishalakshi, Scientist & Co-Inventor, RARS, Vishakapatnam
2. Dr. A. Kandan, Principal Scientist & Co-Inventor, ICAR-NBAIR

Recommendation by Committee:

The committee approved and recommended the technology. However, the committee suggested to commercialize the technology after generating toxicology data. They also suggested for the possibility of emergency registration for the product with CIBRC, if any. The cost of the technology is fixed for 2.5 lakhs with GST as applicable. The committee recommended not to include Ms. B. Poornesha, SRF as a inventor for technology, however the SRF may be included as a author for the publication, if any. Therefore, the invention disclosure form may be modified and resubmitted. Similarly, Dr. Ramanujam is asked to resubmit the invention disclosure form for the technology "*Metarhizium anisopliae* ICAR-NBAIR Ma-4 for management of whitegrubs in sugarcane.

Agenda-III: Invention disclosure by Dr. M. Nagesh, Principal Scientist & Inventor

Dr. Nagesh presented an invention "Novel Granular formulation of Entomopathogenic Nematode, *Heterorhabditis indica* NBAIL-Hi101 for management of selected lepidopteran and coleopteran insect pests for filing IP. The following are the Co-Inventors of the Technology.

1. Dr. K. Srinivasamurthy, Principal Scientist & Co-Inventor, ICAR-NBAIR
2. Dr. Jagdeesh Patil, Scientist & Co-Inventor, ICAR-NBAIR
3. Dr. Chandish R. Ballal, Director & Co-Inventor, ICAR-NBAIR

Recommendation by Committee

The committee approved and recommended the technology for filing IP in India.

Agenda-4: Invention disclosure by Dr. Rangeshwaran, Principal Scientist & Inventor

Dr. Rangeshwaran presented a technology “*Bacillus thuringiensis* ICAR-NBAIRBT25 for management of Fall armyworm *spodoptera frugiperda* in Maize for commercialization and the following are the Co-Inventors

1. **Dr. A.N. Sylesha, Principal Scientist & Co-Inventor, ICAR-NBAIR**
2. **Dr. G. Sivakumar, Principal Scientist & Co-Inventor, ICAR-NBAIR**
3. **Dr. A. Kandan, Principal Scientist & Co-Inventor, ICAR-NBAIR**

Recommendation by Committee:

The committee approved and recommended the technology. However, the committee suggested to commercialize the technology after generating toxicology data. They also suggested for the possibility of emergency registration for the product with CIBRC, if any. The cost of the technology is fixed for 2.5 lakhs with GST as applicable.

Agenda-5: Invention disclosure by Dr. K. Selvaraj, Scientist (Sr. Scale) & Inventor

Dr. Selvaraj presented a technology on “Potential entomopathogenic fungus *Isaria fumosorosea* (strain ICARNBAIR Pflu-5) for management of rugose spiraling whitefly *Aleurodicus rugioperculatus*” for technology transfer/commercialization and the following are the Co-Inventors

1. **Dr. B. Ramanujam, Principal Scientist & Co-Inventor, ICAR-NBAIR**

Recommendation by Committee:

The committee approved and recommended the technology. However, the committee suggested to commercialize the technology after generating toxicology data. The cost of the technology is fixed for 2.5 lakhs with GST as applicable. The committee advised that the SRFs can not be included as inventors, however, they may be considered for publications arising out of the project, if any. Therefore, Dr. Selvaraj may modify and resubmit the invention disclosure form.

Dr. Selvaraj, Scientist (Sr. Scale) & Inventor presented another technology “Mass production technology for parasitoid “*Encarsia guadeloupae* for the suppression of rugose spiraling whitefly and the following are the Co-inventors.

1. **Dr. T. Venkatesan, Principal Scientist (Entomology) & Co-Inventor, ICAR-NBAIR**
1. **Dr. Chandish R. Ballal, Director & Co-Inventor, ICAR-NBAIR**

Recommendation by Committee:

The committee approved and recommended the technology. The cost of the technology is fixed for Rs. 1.0 lakh (one lakh only) plus GST as applicable. Furthermore, the committee opined that TA/DA/honorarium may be charged additionally from the licensee if the company requests the inventors to visit their premises for technical help. The committee advised that the SRFs can not be included as inventors, however, they may be considered for publications arising out of the project, if any. Therefore, Dr. Selvaraj may modify and resubmit the invention disclosure form.

Agenda-6: Price revision for Dr. Subaharan's technologies

- a) Adsorption and delivery of molecules using nanoporous materials charges to be enhanced from Rs. 2 lakhs to Rs. 4 lakhs.
- b) Insect repellent formulation and methods thereof to be reduced from Rs. 1.0 lakh to Rs. 50,000/

Recommendation by Committee:

The committee approved and recommended the revised rates as requested.

Agenda 7: Approval of benefit sharing of the technology commercialized

The committee approved and recommended that the benefit sharing details of technology should be approved by the competent authority, Chairman, ITMU, Administrative officer and Finance and Accounts Officer before distributing the money.

2 in consultation with

Agenda 8: Inclusion of TDS charges and GST separately with technology price.

The committee recommended that the above item may be discussed with the competent authority, Administrative officer, Finance and Accounts officer and Chairman, ITMU separately

General Recommendation:

- The committee opined that if any companies are interested to generate toxicology data for the product, the proposal may be considered after entering into an agreement (MOA).
- The committee once again recommended that the SRFs/RAs can not be included as inventors in technology commercialization/IP filling. However, they may be considered for publications arising out of the project, if any.
- The committee also recommended to revise the cost of the technologies keeping in view of the demand in the market and accordingly the inventors may be intimated.

The meeting concluded at 2PM and T. Venkatesan proposed vote of thanks.

Signatures

Dr. Chandish R. Ballal

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Ranch
निदेशक/ Director
राष्ट्रीय कृषि कीट संसाधन बुजुरो
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Dr. Sudha Mysore

:

N. Bakthavatsalam

N. Bakthavatsalam
19/3/2020

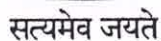
Dr. M. Nagesh

Dr. T. Venkatesan

Dr. Sunil Joshi

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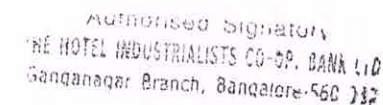
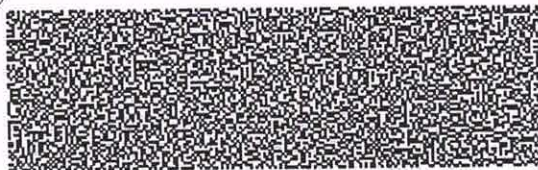
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20/03/2020
Sunil Joshi



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“POTENTIAL ENTOMOPATHOGENIC FUNGUS *ISARIA FUMOSOROSEA* (STRAIN ICAR-NBAIR- PFU-5) FOR MANAGEMENT OF RUGOSE SPIRALING WHITEFLY *ALEURODICUS RUGIOPERCULATUS* IN COCONUT AND OIL PALM”

THIS AGREEMENT/MEMORANDUM OF UNDERSTANDING made and entered into on **05-Feb-2021**
BY AND BETWEEN

The Indian Council of Agricultural Research, No. 1, Rajendra Prasad Road, Krishi Bhawan, New Delhi - 110001; hereinafter referred to as ICAR; [or] as represented by its constituent, the ICAR-National Bureau of Agricultural Insect Resources, Post Bag No. 2491, H. A. Farm Post, Hebbal, Bangalore-560024

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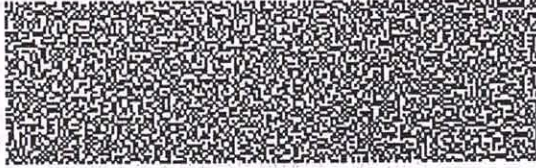


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THIS AGREEMENT/MEMORANDUM OF UNDERSTANDING made and entered into on **25-March-2021**
BY AND BETWEEN

The Indian Council of Agricultural Research (ICAR), an autonomous organization under the Department of Agricultural Research and Education, having its Registered Office at No. 1, Rajendra Prasad Road, Krishi Bhawan, New Delhi – 110001 and represented by its constituent, the ICAR-National Bureau of Agricultural Insect Resources (ICAR-NBAIR), Post Bag No. 2491, H. A. Farm Post, Hebbal, Bangalore-560024

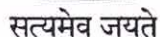
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**MEMORANDUM OF UNDERSTANDING FOR LICENSING OF KNOW-HOW OF
"POTENTIAL ENTOMOPATHOGENIC FUNGUS *ISARIA FUMOSOROSEA* (STRAIN ICAR-NBAIR-
PFU-5) FOR MANAGEMENT OF RUGOSE SPIRALING WHITEFLY *ALEURODICUS*
RUGIOPERCULATUS IN COCONUT AND OIL PALM"**

THIS AGREEMENT/MEMORANDUM OF UNDERSTANDING made and entered into on **06-July-2021**

BY AND BETWEEN

The Indian Council of Agricultural Research, No. 1, Rajendra Prasad Road, Krishi Bhawan, New Delhi – 110001; hereinafter referred to as ICAR; [or] as represented by its constituent, the ICAR-National Bureau of Agricultural Insect Resources, Post Bag No. 2491, H. A. Farm Post, Hebbal, Bangalore-560024

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