

**Prioritization, Monitoring and Evaluation (PME) Cell**  
**ICAR - INDIAN INSTITUTE OF NATURAL RESINS AND GUMS**  
**NAMKUM, RANCHI - 834 010**

**LIST OF APPROVED RESEARCH PROJECTS FOR THE YEAR 2019-2020**

Ref.: IINRG/PMEC/IRC/August, 2019

<b>Core Program - I : Productivity and Quality Improvement</b>							
Sl. No.	Project No.	Title of the Project	Name of Investigators	% Time	Year of Start	Year of Completion	*
1	1.1.060	Collection, conservation, characterization and documentation of lac insect/host plant biodiversity (Phase - III)	Dr. VD Lohot Dr. J Ghosh Dr. Thamilarasi K Dr. A Mohanasundaram Ms Shruti Sinha	25 25 25 25 25	April, 2017	March, 2020	Shri NN Rajagopal
2	1.1.066	Morpho-physiological characterization vis-à-vis strategies to augment quality and storability of seeds of <i>Schleichera oleosa</i> under ambient condition	Dr. NK Sinha Dr. VD Lohot LC Langlentombi	30 25 25	October, 2017	September, 2020	Dr. J Ghosh
3	1.1.067	Understanding lac insect-host plant interaction --- A molecular approach	Ms Shruti Sinha Dr. Thamilarasi K	50 15	June, 2018	May, 2020	-
4	1.1.069	Agronomic interventions influencing lac production in <i>paldas (Butea monosperma)</i> in summer season	Dr. S Ghosal Shri NN Rajagopal	25 25	March, 2019	May, 2025	-
5	1.1.070	Taxonomic studies of lac insects (Hemiptera: Coccoidea: Tachardiidae) and associated insect fauna	Shri NN Rajagopal	25	June, 2018	May, 2020	Dr. A Mohana sundaram
<b>Core Program - II : Crop Production System Management</b>							
6	1.1.065	Evaluation of the effect of drip irrigation and plastic mulch on growth and yield of <i>Flemingia strobilata</i>	Er. SK Srivastava	50	January, 2018	March, 2021	Dr. S Ghosal
7	1.1.068	Effect of abiotic factors on lac associated fauna in <i>rangeeni</i> crops (Phase-II)	Dr. A Mohanasundaram	25	August, 2018	December, 2021	-
8	1.1.071	Lac Integrated Cropping System-III	LC Langlentombi Dr. S Ghosal Dr. NK Sinha Er. SK Srivastava Shri NN Rajagopal	50 25 25 25 25	April, 2019	March, 2022	-
<b>Core Program - III : Processing, Storage and Quality Management</b>							

10 1.2.066 Biodegradation studies on the resin using soil burial method Dr. M.F. Arora 50 April, 2016 March, 2020

Sl. No.	Project Title	Project Leader	Project kept in abeyance	
			Start Date	End Date
9	Establishment of pilot-plant of dewaxed decolourized lac (DDL) for training, demonstration and process refinement	Er. SK Pandey, Dr. SC Sharma Dr. N Prasad	50	April, 2017
10	Development of pilot plant of guar gum derivative for training and demonstration	Dr. A Roy Chowdhury	25	March, 2020
101		Er. SK Pandey	30	
112	Study on spray drying of gum ghatti ( <i>Anogeissus latifolia</i> )	Er. Ranjit Singh Er. Priyanka Sakare (October, 2018)	35 25	April, 2018
113	Study on infrared drying of seed lac	Er. Priyanka Sakare Er. Ranjit Singh	35 25	April, 2019

Arora

**Core Program - IV : Value Addition, Application Development and Product Diversification**

13	Synthesis of natural gum based nanocomposite hydrogel for wound healing and water treatment	Dr. S Srivastava Dr. Biplab Sarkar, ICAR-IIAB	40	April, 2017	September, 2019
14	Synthesis of guar gum hydrogel-nanoparticle hybrid scaffold	Dr. Roy Chowdhury Dr. N Thombare (April, 2018)	25 20	July, 2017	June, 2020
15	Development and evaluation of resin/gum based sticky insect trap	Dr. N Thombare Dr. S Srivastava	35 25	April, 2018	March, 2021
16	Study on natural gum based dietary fibre as encapsulant for delivery of functional feed	Dr. A Roy Chowdhury Dr. N Thombare Er. Ranjit Singh Dr. Biplab Sarkar, ICAR-IIAB Dr. S Maurya, ICAR-RCER Plandu	35 25 25 -	September, 2019	August, 2022

**Core Program - V: Capacity Building of Farmers and Entrepreneurship Development**

17	Capacity building, skill development, extension education and information service on natural	Dr. Nirmal Kumar Dr. SKS Yadav	25 25	October, 2017	March, 2020
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Ar. N. Prasad

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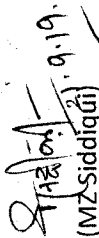
Project under Prog. IV

resins and gums		Dr. RK Yogi	25		
<b>Core Program – VI: Technology Evaluation, Refinement, Dissemination and Demonstration</b>					
189	1.3.053	Market information support and impact assessment of technological interventions for NRGs	Dr. RK Yogi Dr. Nirral Kumar	25 25	October, 2017 March, 2020
<b>ICAR-Network Projects</b>					
186	3.2.026	<b>Network project on Harvesting, Processing and Value Addition of Natural Resins and Gums (ICAR)</b> Comparative evaluation of properties of <i>Bahera</i> ( <i>Terminalia bellerica</i> ) gum exudates collected from different agro-climatic zones Exploration and preparation of field guide for minor gum & resin producing plants in India Effect of Tapping Techniques on Gum Yield from <i>Moringa oleifera</i> Trees Field evaluation of developed <i>piyar</i> gum induced silver nanoparticles (AgNPs) against crop phytopathogens Development and characterization of <i>guar</i> gum with <i>Piyar</i> -AgNPs induced nanocomposite films for diversified applications	Dr. N Prasad (PC & PI) Er. Anamika Thakur, ICAR HQ Dr. MZ Siddiqui Dr. N Thombare Dr. SC Sharma Er. SK Pandey Dr. MZ Siddiqui Dr. MZ Siddiqui Er. Priyanka Sakare	25 - - 25 25 25 25 40 - 25	February, 2009 April, 2018 April, 2018 January, 2019 April, 2019 April, 2019 August, 2014
20	3.1.054	<b>Network project on Conservation of Lac Insect Genetic Resources (ICAR)</b> Diversity analysis of aleuritic acid content in major lac insect species/strains and its use for better isolation strategies Field guide for lac hosts • Molecular characterization of new collection • Study of endo symbionts	Dr. KK Sharma (PC & PI) Dr. A Mohanasundaram Dr. VD Lohot Dr. Thamilarasi K	25 25 15 25	March, 2020 March, 2020 March, 2020 March, 2020 March, 2020 March, 2020 March, 2020 March, 2020
<b>ICAR-ICRAF</b>					

21	2.1.054	Enabling tribal communities to improve their livelihoods through agroforestry systems on a sustainable basis	Dr. J Ghosh Dr. AMohanasundaram Dr. RK Yogi	25 15 25	Oct., 2017	March, 2020	-
<b>ICAR-DBT</b>							
22	2.1.055	Identification, cloning and characterization of genes involved in pigment biosynthesis of the Indian lac insect, <i>Kerria lacca</i> (Kerr)	Dr. Thamilarasi K Dr. VD Lohot	25 25	September, 2017	September, 2020	-
<b>Inter-Institutional (ICAR-IINRG &amp; ICAR-IIAB)</b>							
23	--	Enhancing food, nutritional and livelihood security of marginal and small farmers in Jharkhand through need based agricultural technologies	Dr. NK Sinha, Co-PI	25	January, 2017	March, 2020	Dr. Nirmal Kumar
24	--	Development and evaluation of the efficacy of novel nanoparticles for enhancing yield in rice and Indian major carp	Dr. A Roy Chowdhury, Co-PI	25	August, 2016	July, 2021	-

#### Exploratory Study

- 'Genetic manipulation in lac host plant (*F. semialata*) to establish better plant-lac insect interaction' ---- Dr. J Ghosh, PS, LPD, 25%
- 'Development and characterization of guar gum with *Acacia nilotica* & *Jhingan-AgNPs* induced nanocomposite films for diversified applications' ---- Dr. MZ Siddiqui, PS, PPDD, 30%

  
(MZ Siddiqui) 9.19.  
I/c, PMEC

(KK Sharma)  
Director

#### Explanation for coding of the Project Nos.

- (i) First number indicates category of projects: Institute Project-1, Externally Funded Project-2, Network Project-3, (ii) Second number indicates the Divisions: LPD-1, PPDD-2, TOT-3 and (iii) Third number indicates the project number.
- (ii) \*Indicates scientist concerned would assist/facilitate the study without formally being associated with the project.