
केरेबो- केन्द्रीय रेशम जननद्रव्य संसाधन केन्द्र, केन्द्रीय रेशम बोर्ड, होसूर-635 109
CSB - Central Sericultural Germplasm Resources Centre
Central Silk Board, Hosur – 635 109

**MINUTES OF THE 46TH MEETING OF THE
RESEARCH ADVISORY COMMITTEE HELD ON 3RD JUNE 2024**

The 46th meeting of the Research Advisory Committee [RAC] of CSB-CSGRC, Hosur was convened on 3rd June 2024 under the chairmanship of Dr. S. N. Sushil, Director, ICAR-National Bureau of Agricultural Insect Resources [ICAR-NBAIR], Bengaluru. The reconstituted Committee comprised Dr. Kamal Prasad Mohapatra, Principal Scientist, ICAR-NBPGR, New Delhi, Dr. Manjunatha Gowda, Professor, UAS, GKVK, Bengaluru, Dr. T. Venkatesan, Principal Scientist & Head, ICAR-NBAIR, Bengaluru, Dr. M. Sankaran, Principal Scientist & Head, ICAR-IIHR, Bengaluru, Dr. Suresh Kumar, Scientist-D (Retd.), Central Silk Board, Dr. T. Mogili, Scientist-D (Retd.), Central Silk Board, Director (Tech), Central Silk Board and K. Jhansilakshmi, Scientist-D & Head, RCS Section, Central Silk Board as RAC members. Before the meeting commenced, the distinguished members of the reconstituted RAC visited mulberry field gene bank, germplasm nursery, experimental and museum plots, R&D Labs of the centre, which showcased the key facilities.

At the outset, Dr. V. Nishitha Naik, Director, CSB-CSGRC, Hosur extended a warm welcome to the Chairperson & members of the Research Advisory Committee (RAC) and participants to the 46th RAC meeting. She requested the House for their valuable suggestions that would help in improving the research projects and the activities of the centre in future years. Dr. M.C. Thriveni, Scientist-C introduced all the RAC members to the House and requested Chairperson for his opening remarks.

Dr. S. N. Sushil, Chairperson, RAC welcomed all the participants to the first meeting of the reconstituted RAC. He opined that sericulture industry has improved significantly over the years, however there are ways it can further improve in India. It is a highly remunerative crop and therefore, concerted efforts are required for its sustenance. He expressed that the suggestions of the Committee should lead the scientists to a better path for the benefit of the farming community. He opined that, the suggestions should be offered considering the available resources of the centre. With this, the Chairperson advised the house to commence the meeting and requested for fruitful deliberations.

The Director presented an overview of CSB-CSGRC, outlining the mandate and key activities of the centre for the information of the Committee.

The committee greatly appreciated the efforts of the Director and the team in maintaining the huge repository of Seri-genetic resources and carrying out the mandated activities and the following suggestions were made:

- a) Maximum precaution may be taken while maintaining bivoltine and mutant silkworm genetic resources as they are highly sensitive in tropical climatic conditions.
- b) In-house training on germplasm conservation may be provided to newly joined scientists at the centre.
- c) Focus should be on germplasm characterization and evaluation for different traits for the effective conservation and utilization of the genetic resources.
- d) Each scientist should publish atleast 2 research articles in a year as a first author.
- e) Each scientist should have atleast one project as PI and attempt for external funding for the projects.

[Action: All concerned]

Subsequently, agenda-wise items were taken up for discussion.

ITEM NO. I: CONFIRMATION OF MINUTES OF THE 45th MEETING OF RAC HELD ON 12TH OCTOBER, 2023

As no comments were received, the House confirmed the minutes of 45th RAC meeting.

ITEM NO. II: REVIEW OF FOLLOW-UP ACTION ON THE GENERAL & PROJECT-SPECIFIC DECISIONS OF THE RAC MEETING

Follow-up action on the decisions taken during 45th RAC meeting was presented and the following suggestions were made:

1. The surveys can be jointly made with at least two or more scientists from each or both mulberry and silkworm divisions.
2. Automation by use of AI based tools, isothermal techniques can be explored in sericulture.
3. Pre-breeding studies can be explored in order to recommend accessions to breeders.
4. Single superior character for each silkworm germplasm may be deduced on the basis of stable and heritable traits.
5. All data including sequencing and marker data from the completed projects may be integrated with the current database.

[Action: All concerned scientists]

ITEM NO. III: REVIEW ON THE PROGRESS OF THE ONGOING RESEARCH PROJECTS

The ongoing research projects were reviewed and the following decisions were taken:

1. PIE06008SI: Exploration, Collection, Characterization, Evaluation, Re-establishment, Conservation and Supply of Mulberry Genetic Resources (MGRs) (Phase-X)

The availability of pest specific recommended pesticide can be explored from Central Insecticide Board & Registration Committee (CIB&RC), Faridabad, Haryana. A separate plot of mulberry female parental lines/ accessions can be established for future breeding and hybridization experiments. Only unique collections can be added to the FGB after phenotypic and molecular characterization and evaluation.

[Action: Dr. G. Thanavendan, Sci-C]

2. PIG06010SIC: Studies on cytological status of mulberry genetic resources

The impact of ploidy on pest incidence to be studied in mulberry accessions. The drought conditions may be defined properly as applicable to all the accessions under the study. *M. laevigata* accessions viz., MI-364, MI-365 and MI-673 to be studied for both ploidy associated traits & drought conditions. Proper methodology needs to be followed for drought experiments.

[Action: Shri. Raju Mondal, Sci-C]

3. AIE06009MI: Collection, Characterization, Evaluation, Conservation and Utilization of Silkworm Genetic Resources (X phase)

S01: Collection, Characterization, Evaluation, Conservation and Utilization of Silkworm Genetic Resources

The committee suggested to correct terminologies as Yield per 10000 larvae by number/ weight, instead of ERR/ number or weight; Cocoon shell percentage instead of Cocoon Shell ratio.

[Action: Dr. M. Maheswari, Sci-D]

S02: Digitization of phenotypic and biological characteristics of Silkworm Genetic Resources

Marking variations between male and female larvae, egg laying patterns in oval and dumbbell accessions to be observed. A scale should be indicated in the captured images of different stages and accessions.

[Action: Smt. G. Punithavathy, Sci-D]

4. AIG06007MI: Molecular characterization and assessment of genetic diversity in silkworm (*Bombyx mori* L.) germplasm

The committee suggested to present the interpreted experimental data obtained after sequencing and bioinformatics analysis. Complete the validation of the functional annotation data before publication. PI was advised to compile the data and publish two research papers in peer-reviewed journals.

[Action: Dr. G. Lokesh, Sci-D]

ITEM NO. V: REVIEW OF CONCLUDED RESEARCH PROJECT

5. AIT06006MI: Marker-assisted screening to identify silkworm genetic resources tolerant to *BmNPV* and *BmBDV*

The Committee appreciated the outcome of the project and suggested that the information on the identified accessions may be disseminated to other institutes/ stakeholders. The results may be published in peer-reviewed journals.

[Action: Dr. Ritwika Sur Chaudhuri, Sci-C]

ITEM NO. VI: ANY OTHER POINTS WITH THE PERMISSION OF THE CHAIR

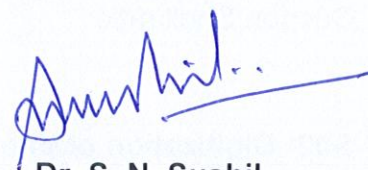
1. The scientists were advised to propose projects for external funding such as DST, DBT and CSIR.
2. Scientists should thrive for attending international conferences and symposia for greater exposure.

[Action: All the Scientists]

Director, CSB-CSGRC thanked all the RAC members for their meaningful deliberations and for providing valuable guidance to the scientists in formulation of the projects and scientific activities.

The Chairperson, Dr. S.N. Sushil appreciated all the scientists and RAC members for their effective discussions and constructive suggestions made during the meeting.

The meeting ended with a vote of thanks by Dr. M. Nandan, Scientist-B.



Dr. S. N. Sushil
Chairperson, RAC

**List of participants for the 46th Meeting of the Research Advisory Committee
Of CSB-CSGRC, Hosur held on 03/06/2024**

1. Dr. S. N. Sushil, Director, ICAR-NBAIR, Bengaluru, Chairperson, RAC
2. Dr. Kamal Prasad Mohapatra, Principal Scientist, ICAR-NBPGR, New Delhi, Member RAC
3. Dr. Manjunatha Gowda, Professor, UAS, GKVK, Bengaluru, Member RAC
4. Dr. T. Venkatesan, Principal Scientist & Head, Division of Genomic Resources, ICAR-NBAIR, Bangalore, Member RAC
5. Dr. Suresh Kumar, Scientist-D (Retd.), Central Silk Board, Member RAC
6. Dr. T. Mogili, Scientist-D (Retd.), Central Silk Board, Member RAC
7. Dr. K. Jhansilaksmi, Scientist-D & Head, RCS Section, Central Silk Board, Member RAC
8. Dr. V. Nishitha Naik, Director, CSB-CSGRC, Hosur, Member Convener RAC
9. Dr. M. Maheswari, Scientist-D & Head, Silkworm & PMCE Division, CSB-CSGRC, Hosur
10. Dr. N. Sakthivel, Scientist-D & Head, Mulberry Division, CSB-CSGRC, Hosur
11. Smt. G. Punithavathy, Scientist-D, CSB-CSGRC, Hosur
12. Dr. G. Lokesh, Scientist-D, CSB-CSGRC, Hosur
13. Dr. Ritwika Sur Chaudhuri, Scientist-C, CSB-CSGRC, Hosur
14. Dr. G. Thanavendan, Scientist-C, CSB-CSGRC, Hosur
15. Dr. M.C. Thriveni, Scientist-C, CSB-CSGRC, Hosur
16. Shri. Raju Mondal, Scientist-C, CSB-CSGRC, Hosur
17. Dr. M. Nandan, Scientist-B, CSB-CSGRC, Hosur
18. Dr. Himanshu Dubey, Scientist-C, CSB-SBRL, Kodathi
19. Shri. S. Sekar A.D (Comp), CSB-CSGRC, Hosur
20. Smt. R. Poonam, Steno (Gr-I), CSB-CSGRC, Hosur
21. Shri. K.V. Deepak, Senior Research Fellow, CSB-CSGRC, Hosur
22. Ms. S. Chandini, Project Assistant, CSB-CSGRC, Hosur
23. Shri. K. Ayyanar, Project Assistant, CSB-CSGRC, Hosur
24. Shri. R. Gokulraj, Project Assistant, CSB-CSGRC, Hosur
