

**PROCEEDINGS OF THE 64<sup>TH</sup> RESEARCH COUNCIL MEETING OF CSGRC  
HELD ON APRIL 30, 2021**

The 64<sup>th</sup> Research Council meeting of CSGRC, CSB, Hosur was convened on 30<sup>th</sup> April 2021, chaired by Dr.B.T.Sreenivasa, Director, CSGRC. He initiated the meeting by welcoming all participants and advised all scientists to work on the progress of their projects as per the milestones. With this, item-wise discussion was taken up. List of participants is appended at Annexure I.

**Item No. I: Confirmation of the minutes of the 63<sup>rd</sup> RC meeting held on 10<sup>th</sup> December, 2020**

The minutes of the 63<sup>rd</sup> RC meeting was confirmed since no comments were received.

**Item No. II: Review of follow-up action on the decisions of the 63<sup>rd</sup> RC meeting**

Action taken on the decisions of the 63<sup>rd</sup> RC meeting held on 10<sup>th</sup> December, 2020 was reviewed and following decisions were arrived at:

- The vacant land of CSGRC, Hosur campus is to be used for extension of mulberry field gene bank. JCB may be hired for clearing the bushes and making pitted rows. Geologist may be consulted for drilling of borewell.

**[Action: Scientists, Mulberry Division]**

- Mulberry plot layout for museum may be planned by systematically grouping the accessions.

**[Action: Scientists, Mulberry Division]**

- Rain water harvesting pits may be prepared by hiring JCB.

**[Action: Scientists, Mulberry Division]**

- Budget for repairing/replacing the net house may be included in the next financial year.

**[Action: Scientists, Mulberry Division]**

**Item No. III: Formulation of new project concepts**

**1. Characterization of silkworm genetic resources with respect to structural properties of the silk filament (Pilot study)**

Dr. Jameela Khatoon, Sc-D presented the concept note for the pilot study. The house suggested to explore the use of SEM, in case the digital microscopy method for studying the structure of silk filament does not give satisfactory results. The concept note was approved and it was advised to submit the same in MIS format to C.O. for clearance at the earliest.

**[Action: Dr. Jameela Khatoon, Sc-D]**

## **2. Digitalization of phenotypic and biological characteristics of silkworm genetic resources.**

Smt. G. Punithavathy, Sc-D presented the concept note. The house discussed the concept of preparing a virtual database for silkworm genetic resources. It should cover the complete descriptions of all silkworm accessions. It was suggested to prepare the full concept note with proper justification in MIS format and submit the same to C.O. for clearance at the earliest.

**[Action: Smt. G. Punithavathy, Scientist-D]**

## **3. Screening of productive silkworm genetic resources for tolerance to Microsporidian (*N. bombycis*) causing pebrine disease**

Dr. G. Ravikumar, Sc-D presented the concept note. The house suggested to modify the title suitable to the concept. The photographs in the presentation should be changed. Introduction of the concept should be modified citing proper justification for taking up the work. Protein based expression analysis to be included in the objective. The consent of SSTL is to be obtained for the collaboration of the project. With these suggestions, the concept note was approved and it was advised to submit the same in MIS format to C.O. for clearance at the earliest.

**[Action: Dr. G. Ravikumar, Sc-D]**

## **4. Screening of fruit yielding mulberry germplasm and development of package and practices for fruit tree plantation**

Dr. G. Thanavendan, Sc-C presented the concept note. The house suggested to modify the title. The objectives may be modified as '1. Screening and evaluation of fruit yielding accessions, 2. Identification of potential fruit yielding accessions, 3. Standardization of package of practices for fruit plantation'. The methodology may be modified to include different treatments. Location may be limited to CSGRC, Hosur only. Plant protection measures may be included. Latest data of preliminary study may be projected. Expected outcome may be modified as per objectives. Inclusion of molecular work for expression of antioxidants may be explored. With these suggestions, the concept note was approved and it was advised to submit the same in MIS format to C.O. for clearance at the earliest.

**[Action: Dr. G. Thanavendan, Sc-C]**

### **Item No. IV: Progress of ongoing research projects (Oct, 2020-Mar, 2021)**

#### **1) PIE-06001 SI: Collection, characterization, evaluation, conservation and supply of mulberry genetic resources - Phase IX (Nov.18 – Nov.21)**

The PI presented the progress of the project. It was advised to prepare an updated survey list. Correspondence may be made to NBPGR with a copy marked to Director (Technical) informing that travel plan for survey will be made once the pandemic situation is normalized. Shortfalls in characterization of 26 mulberry accessions

(anatomy, reproductive and biochemical) should be properly justified. Data collection for all parameters may be completed by May-June, 2021. Possibility of completing the biochemical work under the project at SBRL, Kodathi can be explored and correspondence may be made accordingly. SOP for pruning operations may be revised. Methodology for root weight measurement needs modification. Use of Agave (*Agave americana*) crude extract against stem borer may be standardized and published for the benefit of stakeholders. The project assistant is to be trained to understand the whole process of the project for the effective data compilation and utilization of manpower.

**[Action: Dr. G. Thanavendan, Sc-C; Dr. M.C.Thriveni, Sc-B; Shri. Raju Mondal, Sc-B]**

**2) PIG-06004SI: Studies on cytological status of mulberry genetic resources**

The PI presented the progress of the project. He explained that the protocol for karyotyping is being standardized by different methods in order to obtain crisp and clear separation of the chromosomes. The house suggested to expedite the process of standardization.

**[Action: Shri. Raju Mondal, Sc-B]**

**3) PIG-06005 SI: Molecular characterization of mulberry genetic resources for the identification of duplicates and effective utilization**

The PI presented the progress of the project. The committee suggested the PI to make correspondence to RCS, Central Office to obtain data on SSRs/SNPs of *Morus indica* from CSR&TI, Mysore and finalize on the species for Whole genome sequencing. Services of the project assistant maybe utilized effectively in order to complete the milestones of the project without any deviations.

**[Action: Dr. M.C. Thriveni, Sc-B]**

**4) PIB-3586: Development of superior mulberry varieties through controlled hybridization for North-West Indian states** (Coll. project of CSRTI, Pampore with CSGRC, Hosur)

The Co-PI informed that there is no milestone was set during the period of review for CSGRC, Hosur under the project. The house took note of the same.

**[Action: Dr. G. Thanavendan, Sc-C]**

**5) PIB-3629: Development of mulberry genotypes suitable for rainfed hill farming in North - West India** (Coll. project of RSRS, Jammu with CSGRC, Hosur)

The Co-PI informed that there is no milestone was set during the period of review for CSGRC under the collaborative project. The house took note of the same.

**[Action: Dr. G. Thanavendan, Sc-C]**

- 6) **PIC-01003CN: Genetic enhancement of mulberry by genomics approaches: A multi component network project: NW4b: Mimic alkaloids in mulberry and their role in modulating host plant – Insect interactions** (Coll. project of CSR&TI, Mysore with UAS-GKVK, Bangalore, CSIR-NCL, Pune and CSGRC, Hosur)

The Co-PI informed that there is no milestone was set during the period of review for CSGRC under the collaborative project. The house took note of the same.

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

- 7) **PIT-08004: Study on epigenetic and autophagy modifiers on induction of haploid microspore embryogenesis in mulberry** (Coll. Project of SBRL, Kodathi with CSGRC, Hosur)

The CI presented the progress of the project. The committee suggested that the Services of the JRF maybe utilized effectively in order to complete the milestones of the project without any deviations.

[Action: Shri. Raju Mondal, Sc-B]

- 8) **AIE-06002MI: Evaluation of bivoltine silkworm genetic resources for tolerance to abiotic stress in selected hotspots** (Collaboration with SBRL, Kodathi, CSR&TI, Mysuru, Berhampore & Pampore)

The PI presented the progress of the project. The Committee suggested to include the budget and expenditure of the collaborative institutes in the presentation. Temperature, relative humidity, temperature stress duration and stage may be recorded and presented along with the data for clarity. Denier may be replaced with Filament size and denier as unit.

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

- 9) **AIE-06003-SI Evaluation of silkworm genetic resources of *Bombyx mori* L. with reference to inbreeding depression and their conservation**

The PI presented the progress of the project. It was suggested to consult Dr. Ravindra Singh and Dr. Manjunatha Gowda, RAC members to discuss the analysis of inbreeding depression. Utilization of germplasm may be given in presentation. Services of the project assistant may be utilized effectively in order to complete the milestones of the project without any deviations.

[Action: Dr. C.M.Kishor Kumar, Sc-D]

- 10) **AIT-06006MI Marker-assisted screening to identify silkworm genetic resources tolerant to BmNPV and BmBDV** (Collaboration with SSTL, Kodathi)

The PI presented the progress of the project. The committee suggested to provide details of the primers selected for screening in the presentation.

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

**11)Molecular characterization and assessment of genetic diversity in silkworm *Bombyx mori* L** (Collaboration with SBRL, Kodathi)

Dr. Ritwika Sur Chaudhuri, CI presented the progress of the project in absence of PI. She informed the house that the project was implemented in the month of March, 2021. The recruitment process of JRF is under progress. The committee suggested to make revisions in the MIS document as suggested by the RCS and submit the same at the earliest. The recruitment process of JRF should be completed at the earliest.

**[Action: Dr. G. Lokesh, Scientist-D]**

**ITEM No. VIII: Discussion on General Comments/ Suggestion of RC**

- The concerned scientists may contact NBPGR/IIHR for obtaining training.  
**[Action: Dr. M.C.Thriveni, Sc-B & Shri. Raju Mondal, Sc-B]**
- Sale price of silkworm DFLs may be finalized.  
**[Action: Dr. C. M. Kishor Kumar, Head, Silkworm Division]**
- Compendium of catalogue data and SOP may be prepared and submitted at the earliest.  
**[Action: All scientists]**
- A project concept on cryopreservation may be prepared.  
**[Action: Shri. Raju Mondal, Sc-B]**
- Plot boards/accession boards should be updated at the earliest.  
**[Action: All scientists, Mulberry Division]**
- The PIs should initiate the purchase procedures for chemicals and consumables in view of fund availability under Plan (General). Process of equipment purchase under different projects may be initiated at the earliest.  
**[Action: All Concerned scientists]**
- Publications in the form of research papers, general articles, etc should be made by all scientists in the current year. Abstract for National conference organized by GKV, UAS may be finalized and submitted on priority.  
**[Action: All scientists]**
- Museum upgradation may be taken up at the earliest. The Divisional Heads are advised to update the charts.  
**[Action: All scientists]**

- Course fee for providing training to interns/students may be ascertained.  
[Action: PMCE/Divisional Heads]
- Progress reports should be submitted on time without reminders from PMCE division.  
[Action: All scientists]
- Division-wise unserviceable items should be prepared and submitted to the undersigned for condemnation of the same at the earliest.  
[Action: All scientists]
- Dead stock verification should be given priority and list of items under each division should be submitted.  
[Action: Divisional Heads]
- Planning for rain water harvesting may be done for the main office building in order to avoid water stagnation in the terrace causing seepage and damage to the ceilings.  
[Action: Maintenance Committee]
- The process of handing over of 2 acres of land to ESSPC, Hosur may be carried out at the earliest.  
[Action: Dr. G. Ravikumar, Sc-D]
- Division-wise instrumentation room should be designated for effective maintenance of the scientific equipments as the scientific equipments are not properly placed and utilized. Condemnation of all unserviceable scientific equipments should be carried out at the earliest, which is otherwise hindering the purchase of new equipments.  
[Action: All scientists & Equipment maintenance Committee]
- Painting work of auditorium and museum may be planned and carried out.  
[Action: Maintenance Committee]

The meeting ended with thanks to the Chair.

*[Signature]*  
Director & Chairman  
Research Council

**List of participants for the 64<sup>th</sup> Research Council Meeting of CSGRC  
convened on 30/04/2021**

1. Dr. B.T.Sreenivasa, Director & Chairman, Research Council, CSGRC, Hosur
2. Dr. C.M.Kishor Kumar, Scientist - D & Head, Silkworm Division
3. Dr. G. Ravikumar, Scientist-D & Head, Mulberry Division
4. Dr. M. Maheswari, Scientist -D
5. Smt. G. Punithavathy, Scientist – D
6. Dr. Jameela Khatoon, Scientist – D
7. Dr. Ritwika Sur Chaudhuri, Scientist - C
8. Dr. G. Thanavendan, Scientist - C
9. Shri. Raju Mondal, Scientist - B
10. Dr. M.C. Thriveni, Scientist-B
11. Smt. K. Gayathri, Asst Director (A & A)
12. Ms. Sreya Antony, JRF
13. Ms. Madhurya, Project Assistant
14. Mr. S. Srinivasan, Project Assistant
15. Ms. Shabana Banu, Project Assistant
16. Mr. P. Narasimhan, Project Assistant