



# श्री चित्रा तिरुनाल आयुर्विज्ञान एवं प्रौद्योगिकी संस्थान, जैवचिकित्साकीय प्रौद्योगिकी स्कंध

पूजप्पुरा, त्रिवेंद्रम- 695012, केरल, भारत

(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)

**SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY  
BIO MEDICAL TECHNOLOGY WING**

POOJAPPURA, TRIVANDRUM – 695 012, KERALA, INDIA

(An Institution of National Importance, Dept of Science and Technology, Govt. of India)

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BMT-Purchase & Stores/TRC/SCTIMST/2024-25

Dated: 02/08/2024

## TENDER NOTICE

Sealed quotations are invited from interested firms for the development of a functional prototype of a cost-effective indigenous PCR machine for **Pre-Clinical Testing**.

Details of **Work**: The purpose of this project is the development of a **cost-effective indigenous PCR machine**, equipped with features such as fast cycling times, precise temperature control, automated and validate its efficacy.

### **Scope of Work:**

- **Consultancy for the preparation of the machinable drawings:** Consultancy services to convert the conceptual design developed by the SCTIMST team into machinable drawings suitable for proto type development and fabrication.
- **Consultancy for system design:** Consultancy services to design optimized electronic and mechanical modules along with programming for the proto-type based on the end-user requirements, specifications and concept developed by SCTIMST.
- **Design to Prototype Development:** Transforming the conceptual design into a proof-of-concept functional prototype.
- **Pre-Clinical Testing:** Technical support is required to implement necessary adjustments in both hardware and software following the pre-clinical prototype testing conducted in the Microbiology lab of SCTIMST to evaluate the prototype's performance, consistency, and reliability.

### **Specifications and Required features:**

1. The proposed PCR system should be compatible for the following applications:
  - Endpoint assay / conventional PCR
2. Dimensions: approx.: 30x 50x30 cm or smaller
3. Weight: around less than 2 Kg
4. LCD touch display ( A monitor with touch display that can negate the need for a separate laptop/ desktop computer is desirable)
5. USB provision to export data
6. Number of samples: 16 wells ( for prototype and could be upgradable to 48 or 96)
7. Compatible for 0.2 ml capacity tubes / tube strips
8. Temperature details:



- Method of heating: Peltier block
- Temperature range: 4-99°C (block)
- Lid temperature: 30-99°C
- Accuracy:  $\pm 0.1^\circ\text{C}$
- Approximate ramp rate:  $5^\circ\text{C}/\text{sec}$  ( for cooling and heating)
- Temperature uniformity:  $0.3- 0.5^\circ\text{C}$  within 10 seconds of achieving target temperature.

9. Software should have the capacity to perform the assays mentioned in point 1
10. Design shall satisfy the requirements of CE/FDA approval.

Interested firms may submit the quotation in sealed cover, addressed to the Sr. Purchase and Stores Officer, Biomedical Technology Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Poojappura, Thiruvananthapuram-695012 on or before 23/08/2024, 4PM.

In case of any further clarifications with regard to submission of tenders please be free to contact Purchase and Stores Division, BMT Wing well in advance before closing date of tender. (Ph: 0471- 2520228/2520438/328).

For technical enquiries please contact Ph: 9447102122, email:shaj@sctimst.ac.in

Last date of receipt of tender either through post/by hand or email- [bmtstp@sctimst.ac.in](mailto:bmtstp@sctimst.ac.in) [bmtoss@sctimst.ac.in](mailto:bmtoss@sctimst.ac.in) [bmtpurind3@sctimst.ac.in](mailto:bmtpurind3@sctimst.ac.in) 4.00 PM.

Sd/-

DIRECTOR