



श्री चित्रा तिरुनाल आरुग्गुणान एव प्राध्यागका संस्थान, जवाचाकत्तकाय प्राध्यागका स्कध
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)
टेलीफोन नं./Telephone No: 0471- 2340801/ 2520450, फैक्स/Fax: -0471-2341814
वेबसाइट/Website: www.sctimst.ac.in

BMT-Purchase & Stores/TRC/SCTIMST/2023-24

Dated: 06/02/24

TENDER NOTICE

Sealed quotations are invited from interested firm for the Development of an Automated Portable Cardiopulmonary Resuscitation (CPR) System.

Details of Work: This project focuses on the creation of an innovative, portable device to automate the process of Cardiopulmonary Resuscitation (CPR), crucial in emergency medical care.

Objective: Designing and fabricating a lightweight, easy-to-use automated CPR system suitable to provide consistent and efficient chest compressions and decompressions during CPR and negative pressure ventilation.

Scope of Work:

- **Consultancy for Machinable Drawings:** Consultancy services to convert the conceptual design into machinable drawings, suitable for fabrication.
- **Consultancy for Mechatronic System Design:** Consultancy services to design optimized electronic and mechanical modules along with programming for the mechatronic system.
- **Design to Prototype Development:** Transforming the conceptual design into a proof-of-concept functional prototype.
- **Fabrication of Proof-of-Concept:** Constructing a working model of the device to demonstrate its feasibility and functionality.
 - The automated CPR system to be demonstrated on a mannequin.
 - The system should be portable and convenient in setting up in case of emergency.
- **Pre-Clinical Testing:** Testing the prototype for performance, repeatability, and reliability on a mannequin.
- **Required features:**
 - Automatic and adjustable compression depth ranging from 4 cm to 6 cm.
 - Adjustable compression rate between 100 and 120 compressions per minute, in line with current CPR guidelines.
 - Negative pressure ventilation at rate of 10- 15/min
 - Overall weight: <12kg
 - Ergonomic dimensions to ensure easy handling and transportation.

- Simple, intuitive controls for easy operation under stressful conditions.
- Emergency stop button to immediately halt compressions if necessary.
- Built-in sensors to detect improper placement or potential harm to the patient.
- Compatible with standard CPR protocols and can be used alongside defibrillators.
- Capability to record CPR quality data (compression depth, rate, etc.) for medical review.
- Rechargeable battery-powered or AC line source powered system.

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-695 012 on or before ~~21/02/2024~~, 4.00 PM.

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: 9495983679, email: arunanirudhan@sctimst.ac.in

Last date of receipt of tender either through post/by hand or email- bmtstp@sctimst.ac.in, bmtoss@sctimst.ac.in, bmtpurind3@sctimst.ac.in ~~21/02/2024~~ 4.00 PM.



DIRECTOR

6/2/24