Inter University Centre for Evolutionary and Integrative Biology (*i*CEIB)
University of Kerala, Kariavattom, Thiruvananthapuram
Ref no:*i*CEIB/Pur/Ten004/2018 dated :7 September 2018

Quotations are invited from the competitive suppliers for supply of the following equipments in *i*-CEIB, University of Kerala. Please submit your tenders to the Hon. Director, Inter-University Centre for Evolutionary and Integrative Biology*(i*-CEIB), University of Kerala, Kariavattom campus, 695581, Thiruvananthapuram , Kerala on or before 5.00pm on 1 October 2018 with all the necessary documents.

Sl No	List of equipments with specifications	Number
1	**Homogenizer/Tissue Lyser** **Specifications:** ➢ The system should offer processing of a wide variety of samples, including animal and plant tissues, hard tissues like bones, which can he used to disrupted samples to release high-quality DNA, RNA and protein for subsequent purification and analysis. ➢ Should offer fast simultaneous disruption **48 or 192** samples in minutes through high-speed shaking with tungsten/stainless beads which heat and grind samples. ➢ Should process 96 samples with processing time between 2-4 minutes. ➢ Should have provision of effective disruption and homogenization using liquid nitrogen **or in frozen condition.** ➢ Should have provision for complete isolation & sealing of samples while processing so that there is no chance of cross contamination. ➢ Should be able to disrupt multiple biological samples through high-speed shaking in plastic tubes with steel tungsten carbide	1

	➢ Offer should include adapters: One Adapter set for disruption of 48 samples in 2 ml micro centrifuge tubes along with compatible Stainless Steel Beads. ➢ Adapters for 2x 96 samples (upgradable). ➢ System should be open to accommodate any beads or tubes and reusable. ➢ System should have the Digital settings and control of disruption time (10 seconds – 99 minutes) and vibration frequency (3–30 Hz). ➢ The Vendor should have a good service and application support back up. ➢ Provide an effective application support related to troubleshooting and support. ➢ User list should be enclosed. ➢ Should have 2 year warranty.	
2	**Objective of Cytation3 Cell Imaging Multimode Reader** **Specifications:** Accessory for Cytation 3 Cell Imaging Multimode Reader ➢ Plan Fluorite Objective with magnification of 60x. ➢ Numerical Aperture: 0.7. ➢ Resolution: 305 nm, Depth of Field: 0.9 µm. ➢ Working distance: 1.5 to 2.2 mm. ➢ Should have correction collar, Immersion medium: Air / Dry. ➢ Should be suitable for Bright field, Fluorescence and UV	**1**

	Fluorescence Imaging. ➢ Should have 2 year warranty.	
3	**CO2 Incubator with trigas facility and accessories** **Specifications:** ➢ Should have HEPA air filtration system for providing class 100 air quality conditions inside the chamber. ➢ Should have filtered air exchange, condensation control and decontamination systems. ➢ Should have trigas facility includes CO_2 and N_2. ➢ Should have four heavy-duty, perforated stainless steel shelves. ➢ Should have capacity above 180 liters. ➢ Should have precise CO_2/O_2 control with a choice of TC or IR sensors , CO2 range-0-20% ,O2 range-1-20%. ➢ Temperature range 5^0C above ambient to 55^0C. ➢ Should have water Jacket technology for maximizing thermal stability and providing protection against temperature loss in the event of a unexpected power outage. ➢ Heating elements and insulation surround all sides of the outer chamber wall. ➢ Stainless steel interior and Insulated heated outer door. ➢ Removable, cleanable inner door gasket. ➢ Remote alarm contacts with outer door safety sensor. ➢ UL Listed and CE Marked. ➢ Should provide 2 year warranty	**1**

4	**Analytical Balance** **Specifications:** ➢ Capacity up to 520 g. ➢ Readability down to 0.005 mg. ➢ USP minimum weight down to 14 mg. ➢ Precise sample handling, terminal stand, and built-in sensors. ➢ Workflow user guidance and centralized data management. ➢ Should have compliance with FDA regulations with a full set of quality assurance features to meet the strictest regulations. ➢ Complete process optimization and integration with automated data handling, and convenient accessories. ➢ Should have integrated electrostatic solutions that detects electrostatic charges and enable its removal with integrated ionizer. ➢ Automated dosing options for boosting the process efficiency and accuracy by automating powder and/or liquid dosing. ➢ Should have 2 year warranty	1
5	**Hybridization chamber with facility for refrigeration /Incubation /Rotation/Rocking/Stirring** **Specifications:** ➢ Should have precise temperature control and uniformity for demanding incubation/refrigeration applications. ➢ Should have membrane- based assays/washings and	1

	hybridizations more efficiently. ➢ Should have continuously air circulating chamber at a rate that ensures the temperature consistency and uniformity of all test samples. ➢ Windows for inspecting chambers samples without affecting chamber environment. ➢ Precise temperature range 4^0C to 75^0C. ➢ Thermo-electric (Peltier) refrigeration & heating ➢ Should not compressor. ➢ Microprocessor controls allow for accurate, reproducible conditions. ➢ Temperature and Settings • Heating to 75°C • Cooling to 4°C • Accuracy ±0.2°C • Uniformity ±0.5°C • Resolution 0.1°C • Stability ±0.1°C ➢ Rocking • 2-70 cycles per minute. ➢ Rotating • 1-35 RPM. ➢ Stirring • Speed: 1-1000 RPM. • Stir Reversing: variable for 1-60 seconds. ➢ Chamber Volume: 24 Liters. Should have 2 year warranty	

Hon. Director,
***i*CEIB**