



तेजपुर विश्वविद्यालय / TEZPUR UNIVERSITY

(संसद के अधिनियम द्वारा स्थापित केंद्रीय विश्वविद्यालय)

(A Central University established by an Act of Parliament)

कुल सचिव का कार्यालय/ OFFICE OF THE REGISTRAR

नपाम :: तेजपुर - 784028 :: असम

NAPAAM :: TEZPUR - 784028 :: ASSAM

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### SHORT QUOTATION NOTICE

TU/11-24/Pur/Qtn/2016/202 dated:-27.04.2016.

Sealed quotations are invited from reputed manufacturers/authorized dealers/vendors for supply, installation & commissioning etc. of following equipment required for the DBT project of Dr. Suman Dasgupta, Department of Molecular Biology & Biotechnology, Tezpur University.

#### **List of Items with specifications:**

##### **1. BIOSAFETY CABINET:**

- Fully Microprocessor controlled Class II A2 Type Bio-Safety Cabinet.
- Minimum internal dimension of the work area (H x W x D): 26 x 38 x 18 (inch).
- The cabinet should have HEPA filter for filtering air into the cabinet.
- Should use differential pressure sensor to display the inflow and down flow air velocities in real-time on an LED/LCD display.
- The cabinet should have white lamp for illumination of the work zone and UV lamp in the work cabinet for sterilization.
- UV light must be programmable to allow for specific exposure times from 0-24 hours. Lightening power intensity should be >1100 Lux and cabinet noise level must be less than 65 dB.
- Should have double DC motor and able to automatically adjust the airflow speed.
- Side port for connecting tubing for gas, vacuum etc and Power port inside the cabinet is preferable.
- Automatic UV shut off when sliding sash is lifted and safety alarm for unsafe sliding door position is required.
- The cabinet outer surface should preferably have antimicrobial coating for minimizing contamination.
- Minimum 2 years warranty for the instrument is required.
- A branded rapid western blot detection system with accessories and a suitable online UPS with minimum 30 min backup should be included in the offer.
- Quotation price should include delivery of the instrument at Tezpur University, Napaam, Assam – 784028, India.

##### **2. FLUORESCENT INVERTED MICROSCOPE:**

- **Contrasting methods:** Microscope should be equipped for Fluorescence, Bright Field and Phase Contrast modes with infinity corrected optics.
- **Microscope Frame:** Frame with high static rigidity, waterproof construction to block penetration of water inside the frame. The frame should be compact making it easy to fit in any work environment. Option of light path selector (different % of light reaching eyepiece and camera). The frame should come with Motorized revolving nosepiece and fine & course focus adjustment with minimum step size 10nm or better. Should have the attachable DIC slider. Touch panel controller for all motorized parts of the microscope is preferred.
- **Observation tube:** Wide field Binocular observation tube, having Diopter adjustment.
- **Transmitted light:** Transmitted light Intensity control, and light ON/OFF switch. 100W or more transmitted light illumination, condenser holder, and adjustable field iris diaphragm.
- **Eyepiece:** 10X eyepiece having F.N. 22 or better with Diopter adjustment.
- **XY Stage:** Manual X&Y stage. With holder for well plates, glass slide and petri dish. For live imaging, heated stage may be quoted as optional.



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- **Condenser with phase:** Long working distance condenser for all contrast techniques (N.A.0.50/W.D.45mm) with seven slots or more for different optical element or better. Module for phase should be present. All transmitted light contrasting methods should be possible.
- **Objective nosepiece:** Motorized 6-7 position nosepiece. DIC slot and motorized focus adjustment is preferred.
- **Objectives:** High Resolution and High Contrast, with good cover glass Correction.
  - Plan Fluorite Phase objective 10X/ NA 0.3 or better.
  - Long Working Distance Plan Fluorite Phase objective 20X, NA 0.45 or better.
  - Long Working Distance Plan Fluorite Phase objective 40X, NA 0.60 or better.
  - Plan Fluorite objective 100X NA 1.3 or better.
- **Fluorescence:** Motorized fluorescence filter turret with 6 or more positions. Adjustable aperture and field diaphragms. Metal lamp housing with 120 Watt - 130W HG lamp with 2000 Hours life span.
- **Fluorescence filters:** Fluorescence filters of high transmission narrow band for DAPI/Hoechst, FITC/GFP/Alexa 488 and TRITC/Rhodamine/PI/Alexa 594. All filters should not have any pixel shift.
- **Dedicated Camera :** Should be equipped with high resolution fully scientific grade dedicated digital cooled color and monochrome CCD camera with 2/3" CCD chip size or better and a minimum of 1.5 million pixels or better with pixel size 6.45 um X 6.45 um or better and universal imaging facility for fluorescence and bright field application.
- **Shutter:** If the shutter system for time lapse single and multiple channel imaging is not present in control unit, should be quoted separately.
- **Advance Image Analysis Software:** Should be provided with advanced image acquisition and analysis software having camera control and control of all function of motorized systems of the microscope. Should have time-lapse recording control with option to save as AVI or MPEG-1 movie and automated multi-channel fluorescence capturing.
  - Should have capabilities related to display and image processing like, scale bar, pseudo-colouring, image over lay, merge channels, Z-series image display, deconvolution, extended depth of focus (preferable) etc.  
Should have measurement capabilities like, measurement of colocalization, intensity measurement, area measurement, automated object measurement (additional morphometric analysis capabilities are preferred), analysis of intensity over time series (preferred) etc. Measurement of cell motility is preferred.
- **Computer:** One very high end computer, including high resolution large monitor, with high configuration to run the above system smoothly should be included in the offer. Computer should be configured in such a way that it can easily handle any upgrade in the microscope and software in near future.
- **UPS:** A suitable UPS to provide at least 30 min of power back up to the microscope, control unit, and computer should be provided with the machine.
- **Warranty:** Whole system including computer should carry warranty for minimum 2 years.
- A non-vibrating table to accommodate all the components of the microscope and a 1.5 ton air conditioner should be quoted as optional accessories.
- Quotation price should include delivery of the instrument at Tezpur University, Napaam, Assam - 784028, India. University will provide required documents, but clearing, handling and delivery at Tezpur University has to be borne by the supplier. Free installation and demonstration should be arranged by the supplier.

### 3. -80°C FREEZER:



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- Volume: minimum 470 litres with at least 4 internal compartments and vertical in design.
- Temperature range: -50°C to -80°C.
- Should have microprocessor controlled monitoring system.
- Should have polystyrene or polyurethane foamed insulation.
- At least two stage cooling system.
- Reduction of temperature from -50°C to -80°C should be achieved maximum by 4 hrs.
- Refrigerant: CFC/HCFC-free environmentally safe refrigerant.
- Evaporator type: cold wall with enhanced heat transfer system.
- Good air circulation and filter system to keep the compressor cool.
- Interior and exterior surfaces should be protected from corrosion.
- Machine with in-built voltage compensator is preferred.
- Machine should be with door lock and additional safety features are preferred.
- Alarm system: audible/visual alarm system with battery back-up of temperature deviation, door open, low battery.
- Pressure equalization port for reopening of door within a minute.
- Warranty: minimum 2 years and 4 years for compressor.
- Wireless data monitoring for the freezer temperature with SMS alert facility should be quoted for future upgradation.
- Storage racks and storage boxes should be included in the offer.
- The offer should also include a branded automated cell counter with accessories and a suitable online UPS system with 30 min backup.
- Quotation price should include delivery of the instrument at Tezpur University, Napaam, Assam – 784028, India.

#### **4. MULTIMODE DETECTOR:**

- The instrument should be a spectral scanning multimode detector with high sensitivity and accuracy.
- System should have detection modes for absorbance, fluorescence and luminescence.
- The instrument should have both Top and Bottom reading options and have capacity to perform biochemical and cell based assays.
- System should have multiple read modes including end point, kinetic and spectral scanning measurements.
- System should be compatible for 6-384 well plate reading and have ability to read low volume.
- Should be able to read wide range of wavelengths with low bandwidth.
- Instrument should have quadruple monochromator based, double excitation and double emission monochromators for fluorescence applications.
- Luminometry should have three measurements mode – normal, filter and monochromator mode with excellent sensitivity.
- Should have two dispensers and dispensing volume should be 2µl to 5000 µl with 1 µl increments.
- Dispensers should have automatic safety control based on maximum well volume.
- System should have Alpha screen module with filters for AlphaScreen and AlphaLISA
- System should have automatic safety checks like Plate check, Prime check, Position sensors, Shaker check and Volume check.
- System should able to read 96 different wavelength in one 96 well plate in one protocol.
- Should have facility of auto-calibration, self-diagnostics, auto-dynamic range and security features.



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- System should have orbital shaking capacity with adjustable timing, speed and diameter. Also have automatic safety control based on the shaking speed and plate format to avoid spilling of the liquid from wells.
- On-board incubation temperature should be upto 45°C and incubator must function by preventing condensation on a microplate lid to enable reading through the lid even during long kinetic assays.
- Should be upgradable for TRF (Time Resolved Fluorometry) with upgradable facility for integrated Gas module in future.
- System should be supplied with analysis software with user license.
- Minimum 2 years warranty for the instrument is required.
- The offer should include a suitable non-vibrating table to accommodate the system and one air conditioner (2 ton).
- System should also include a CO<sub>2</sub> incubator with following specifications:
  - Polished stainless steel chamber with internal volume: 160-190 lit.
  - HEPA filtered chamber airflow. Air jacketed and direct heating.
  - Should have 3-4 stainless steel shelves.
  - Temperature range: 4°C above ambient to 45°C. CO<sub>2</sub> range: 0-20%.
  - High temperature disinfection by either dry or moist heat.
  - The incubator should have a direct humidification design for maximum humidification efficiency.
  - The display must viewing of all basic parameters like humidity, temperature & CO<sub>2</sub>. Touch screen for setting CO<sub>2</sub> level and temperature.
  - Programmable tracking alarms for temperature, CO<sub>2</sub> and water level.
  - Should be supplied with a two-stage regulator and two filled in CO<sub>2</sub> cylinders.
  - Minimum 2 years of warranty is required.
- Quotation price should include delivery of the instrument at Tezpur University, Napaam, Assam – 784028, India.

## **5. SHAKING WATER BATH:**

- Chamber capacity: 12-15 litres.
- Minimum internal dimension of the work area (H x W x D): 11 x 12 x 6 (inch).
- Temperature range: Ambient +5 to +100°C with temperature stability: ± 0.1°C.
- Should have adjustable shaking speed range from 30 to 200 rpm.
- Precise temperature and speed control.
- It should have features to save programmes of temperature and shaking speed settings.
- Easy to operate and have monitor with icon-based display. Should be easy to clean and have coil-free design.
- Should have auto-on and auto-off timers.
- Should have facility to prevent bath overheating, low-fluid protection with audible alarms.
- Should have facility to accommodate taller labwares.
- Should be supplied with accessories like chamber cover, 1ml microcentrifuge tube rack, and clamps to hold 50ml, 125ml & 250ml flasks.
- Minimum 2 years warranty is required.
- A branded pipette sets of 6 (0.2-2µL, 2-20µL, 1-10µL, 10-100µL, 20-200µL and 100-1000µL) with a pipette carousel should be included in the offer.
- Quotation price should include delivery of the instrument at Tezpur University, Napaam, Assam – 784028, India.



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## **GENERAL TERMS & CONDITIONS:**

1. No separate tender paper will be issued from the office; one should only download the specifications/List from the website.
2. **The rates should be preferably quoted in Indian Rupee and FOR Tezpur University, Napaam basis. Charges for clearing and transportation should be incurred by the supplier.**
3. *Quotations should be accompanied by i) An EMD (in the form of Demand Draft/Call Deposit/TDR) of ₹. 5000/- (Rupees Five Thousand) only drawn/pledged in favor of Registrar, Tezpur University, payable at Tezpur. **No request for consideration of earlier deposited EMD will be considered.** ii) A non refundable application (quotation) fee of ₹.1000.00 (Rupees One Thousand) only have to be paid only by Demand Draft drawn in favour of Registrar, Tezpur University payable at Tezpur.*
4. The rates should be exclusive of taxes and applicable tax % should be clearly indicated.
5. Quoted rates should be valid at least for a period of 01 year.
6. The rates should be quoted along with supporting documents of specifications and technical features and list of users.
7. The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
8. All the quotations must be accompanied with supporting documents and / or literature.
9. Demonstration may be sought from the vendors for authentication of quoted specification.
10. Details of availability of after sales support will have to be furnished. After sales support directly from manufacturer and from Assam (Guwahati / Tezpur) will be preferred.
11. The University is exempted from paying Custom and Excise duty.
12. Proprietary items should be quoted with sole Manufacturer/Distributorship certificate.
13. Warranty/Gurantee period should be specifically mentioned in the quotation.
14. No Advance payment will be made. However, for foreign supplier, advance payment will be made either by FDD/Wire Transfer/LC. In such cases 10% Performance Bank Guarantee should be submitted before issuing FDD/Wire Transfer/LC, covering the warranty period.
15. Performance Bank Guarantee also has to be submitted for Major equipments of Indian origin, covering the warranty period.
16. Items of Foreign origin should have Insurance up to installation on site.
17. The University reserves the right to accept or reject any or all the quotations without assigning any reason.
18. Quoted price should be inclusive of essential accessories and should be CIF Tezpur University, Tezpur
19. Applications for release of EMD should be submitted to the Registrar/ Deputy Registrar.
20. Apart from the above terms and conditions the University has the right to include any other terms and conditions as and when felt necessary.
21. **Quotation should be submitted in the DROP BOX placed in the reception of the Administrative Building of the University within 21 days from the issue of the notice.If posted/couriered, should reached within 21 days from the issue of this notice addressed to "The Deputy Registrar (GA), Tezpur University". The Quotation Notice No. and date should be clearly superscribed in the the envelope/packet containing the quotation.**

Sd/-Deputy Registrar (GA)  
Tezpur University