

# INVITATION TO TENDER AND INSTRUCTIONS TO TENDERERS

**Tender for  
Procurement of Equipments for  
“Complete Platform of Animal Cell Line and Metabolomic Facility”  
For CBT-IST under DST-FIST.**

**Tender**

**Schedule for sale of document: 30.06.2018 to 13.07.2018**

**Tender opening Date: 14.07.2018**



**CENTRE FOR BIOTECHNOLOGY  
INSTITUTE OF SCIENCE & TECHNOLOGY  
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY  
KUKATPALLY, HYDERABAD.**

**TENDERER**

**Dr. A. UMA**  
Assistant Professor  
Centre for Biotechnology,  
Institute of Science and Technology,  
J.N.T. University Hyderabad,  
Kukatpally, Hyderabad-85, Telangana State.  
**Coordinator  
DST-FIST.**

**DIRECTOR  
DIRECTOR**

JNTU Institute of Science & Technology  
Kukatpally, Hyderabad-85.



**INVITATION TO TENDER AND  
INSTRUCTIONS TO TENDERERS FOR THE SUPPLY OF EQUIPMENTS FOR  
COMPLETE PLATFORM OF ANIMAL CELL LINE AND METABOLOMIC FACILITY  
FOR  
CBT, Institute of Science & Technology, JNTUH**

Institute of Science & Technology, Jawaharlal Nehru Technological University, Hyderabad invites tenders for the supply of equipments for **“Complete Platform of Animal Cell Line and Metabolomic Facility”** for CBT-IST under DST-FIST as per specifications given in the Schedule attached to the Tender form annexed here to. All offers should be made in English and should be written in both figures and words. The list of equipments include

S.No	Name of equipment	Quantity
1	CO <sub>2</sub> incubator	1
2	Multimode reader	1
3	-86°C Deep Freezer	1
4	FTIR	1
5	RT-PCR	1

The tender schedules can be obtained from CBT, IST, JNT University, Kukatpally, Hyderabad on payment of Rs.2000/- (Rupees Two Thousand only) in the form of crossed Demand Draft on any Nationalized Bank drawn in favor of “The Director, IST, JNTUH, Hyderabad.” payable at Hyderabad. Alternatives offer / option, if any, must be quoted in separate tender schedule.

Tender fee once paid is neither refundable, transferable nor adjustable for other tenders. The tender form is non-transferable and should be purchased in the exclusive name of the party who has to actually submit the offer.

The Director, IST, JNT University, Hyderabad reserves the right to select certain items (in single or multiple units) and reject the others or all mentioned in the schedule. The Director, IST, also reserves the right to revise or alter the specifications of the above mentioned equipment before acceptance of any tender.

Incomplete tenders, amendments and additions to tender after opening or late tenders are liable to be ignored, and rejected.


**Delivery:**

The tenderer shall be responsible for delivery of the given equipments including installation (including civil works if any) as per the specifications at destination site. No additional charges would be paid in separate.

**EMD:**

A Demand Draft for Rs. 25,000/- (Rupees Twenty Five Thousand only) drawn in favor of “The Director, IST, JNT University, Hyderabad” towards EMD must accompany the tender. Those tenders without EMD will be rejected summarily. The EMD will be refunded to all the unsuccessful tenderers only after the purchase orders are placed on the successful tenderer.

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**DIRECTOR**

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The final acceptance of the above mentioned equipments will be made only after delivering goods in good condition and to the satisfaction of the specifications given, by the Institute and satisfactory functioning of the same.

**Prices:**

The Prices must be quoted in Indian rupee currency with detailed description and should be inclusive of packing, forwarding, freight, insurance, delivery and installation (including civil works if any) at destination site (CBT, Institute of Science & Technology, JNTUH, Kukatpally, Hyderabad) and all taxes.

**Validity:**

The tenders should be valid for acceptance up to a period of 30 days. The tenderers should be ready to extend the validity, if required,

**Demonstration and feedback:**

The tenders must accompany the list of reputed organizations, and educational institutions where the similar orders have been executed with track record along with proof of work order. They should provide the demonstration, if required.

**Delivery:**

All the items ordered shall be delivered with proper packing within the maximum delivery period of 60 days from the date of issue of order at the above destination.

**Terms of Payment:**

Payment shall be made by Dr.A.Uma, Coordinator, DST-FIST, CBT-IST, JNTU, Hyderabad only after receipt of the equipments (including accessories) in good condition with all specifications, standards, demo and training to the entire satisfaction of the Institute/University. If the institute is unsatisfactory with any of the specified/unspecified but essential features of the equipment the instrument will be summarily rejected even after delivery and demo.

**Terms and Conditions of the Tendering Firms:**

Printed terms and conditions of the Tenderers will not be considered as forming part of their tenders. Tenderer should supply the above mentioned equipments as per the specifications. If it is not done as per the same, the purchase committee (including technical and financial) decision is final.

**Delivery of Tender:**

The sealed tender should be addressed to:

**The Director,  
Institute of Science & Technology,  
JNT University Hyderabad,  
Kukatpally, Hyderabad – 500 085**

Superscripted on the right hand side **"TENDER FOR "PROCUREMENT OF EQUIPMENTS FOR COMPLETE PLATFORM OF ANIMAL CELL LINE AND METABOLOMIC FACILITY" FOR CBT, IST"** and should indicate clearly the name and address of the tenderer. In addition, left hand corner of the envelope / container should indicate the Tender No., date and time of opening of tender. The Institute reserves the Right to reject any tender which fails to comply with the above instructions. All tenders should be sent by Registered post or through messenger- to drop the tender in the sealed tender box provided in the office; it is the responsibility of the tenderer to see that his tender offer is delivered by the specified time at the above address. All further communication should be addressed to the Officer named above and by title only.

**TENDERER**

*[Signature]*  
**Coordinator  
DST-FIST,**

*[Signature]*  
**DIRECTOR**

JNTU Institute of Science & Technology  
Kukatpally, Hyderabad-85.



**Time for Receipt of Tenders:**

The tender must reach the Director, Institute of Science & Technology, JNT University, Kukatpally, Hyderabad – 500085 not later than 13<sup>th</sup> July 2018, by 03:00 pm. Tenders submitted after the specified time shall not be considered and no intimation will be sent in this regard. The Tenders will be opened on 14<sup>th</sup> July 2018 from 3.00pm to 4.00 pm.

**Tenderer should make their representative available at the time of opening tenders in the meeting hall of the institute located on 2<sup>nd</sup> floor, IST Building or any other designated place with in the University Campus.**

**Right to Acceptance:**

The Director, Institute of Science & Technology, JNT University, Hyderabad and Dr.A.Uma, Coordinator, DST-FIST, CBT-IST do not bind themselves to accept the lowest on any tender and reserves to the right of accepting the whole or any part of the tender or portion of the quantity offered and the tenderer shall supply the same at the rate quoted. Further the Director, IST and Dr.A.Uma, Coordinator, DST-FIST, CBT-IST reserves the right to reject any or all offers received in response to tender or cancel or withdraw the tender notice without assigning any reason, whatsoever.

**Results of Tender:**

Acceptance of Tender shall be communicated by letter of acceptance or formal acceptance of the tender to the successful tenderer.

**Other Terms:**

The Tenderer should produce Value Added Tax (VAT) – Registration Certificate. Only 5% GST is allowed any instrument without any other extra taxes.

Tenderer should be responsible and bear any price escalation within the validity period and also after the indent has been placed till the supply.

**Warranty Declaration: All tenderers should give a warranty declaration on nonjudicial stamp paper of Rs.100/- as detailed below:**

We have thoroughly gone through the tender terms and conditions of the tender.

We warrant that everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specifications.

Any deviation in the material, and the specifications from the accepted terms may liable to be rejected and the tenderer need to supply all the goods in the specified form to the satisfaction / specifications specified in the order / contract and demonstrate at the their own cost.

The payments shall be made only after receiving the material in the required format and quality to the satisfaction of the University authorities and after satisfactory installation and training.

During warranty period, repair service will be provided within 15-20 days of notice from the university.

For any further information in this regard, please contact The Director, IST during 10.00 am to 04.00 pm, on all working days.

**TENDERER**

*[Signature]*  
Coordinator  
DST-FIST.

*[Signature]*  
**DIRECTOR**

**DIRECTOR**

JNTU Institute of Science & Technology  
Kukatpally, Hyderabad-85.



## SPECIFICATIONS

List of equipment to be quoted under “Complete Platform of Animal Cell Line and Metabolomic Facility” includes:

S.No	Name of equipment	Quantity
1	CO <sub>2</sub> incubator	1
2	Multimode reader	1
3	-86°C Deep Freezer	1
4	FTIR	1
5	RT-PCR	1

### **SPECIFICATIONS FOR CO<sub>2</sub> INCUBATORS**

1. One CO<sub>2</sub> incubators with a capacity of 150 – 210 L capacity is required.
2. Should have a direct heating profile with fan assisted or fanless design.
3. Should be provided with 3-4 adjustable perforated stainless steel shelves which can be increased to 6 upon requirement.
4. The interior of the equipment should be seamless and should be made of copper/stainless steel material. Copper interior would be preferred.
5. Equipment should be microprocessor controlled and display should show levels of temperature, CO<sub>2</sub>, O<sub>2</sub>, humidity and other parameters.
6. Should have fully automated heated decontamination/sterilization cycles.
7. Should have HEPA system filter for CO<sub>2</sub> inlet with recirculation rate of 1 chamber volume change every 20 minutes.
8. The equipment should have independent door heater to eliminate condensation on inner door surface.
9. The equipment should be provided with atleast 2 doors (outer steel and temperature resistant inner glass doors).
10. Should have automatic resetting of preset parameters in case of power failure.
11. Internal water trough for humidity control will be preferred.
12. Alarm for door open, low or high CO<sub>2</sub> levels, low or high temperature etc should be present.
13. Should have a CO<sub>2</sub> control range of 0-20% with +/- 0.1% accuracy and uniformity.
14. Should have TCD/IR CO<sub>2</sub> sensor.
15. Should have a temperature control range from ambient +4°C to 50°C with +/- 0.1°C accuracy and +/- 0.3°C uniformity.
16. O<sub>2</sub> control option for hypoxic studies should be supported with inlet for N<sub>2</sub> Tri or multi gas model.
17. O<sub>2</sub> control range should be 0.1-19% with zirconium Ceramic type of O<sub>2</sub> sensor.
18. Humidity alert design sensors should be present.
19. Two CO<sub>2</sub> cylinders and one N<sub>2</sub> cylinder with compatible regulators, stabilizer with time delay facility; UPS should be supplied along with the equipment.

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20. One N<sub>2</sub> cylinder for anoxic condition maintenance has to be provided.
21. Should have ISO9001 and CE certification.
22. Validation certificate of the decontamination routine from any accredited by 3<sup>rd</sup> party should be provided.
23. User list of at least 5 similar installations in reputed institutes should be provided.
24. All the accessories required for installation and demo should be provided.
25. Warranty for a minimum of 5 yrs should be provided for the entire instrument.
26. Warranty starts from the date of installation and on demand repair services as and when required should be provided.
27. Warranty should be given on manufacturer letter head.

### SPECIFICATIONS FOR MULTIMODE READER

1. The instrument should be a spectral scanning microplate reader.
2. The instrument should be a monochromator based version (no filter based version).
3. It should be able to read both 96 and 384 custom made microwell plate format with and without lids.
4. It should support a wavelength range of UV-Visible-Near IR regions.
5. It should support the following photometric applications.
  - a) Nucleic acid (DNA and RNA) quantitation.
  - b) Protein assays (direct quantitation and colorimetric assays).
  - c) Cell proliferation, viability and cytotoxicity assays.
  - d) Apoptosis assays
  - e) Enzymatic activity assays.
  - f) Spectral and kinetic assays.
  - g) Endotoxin assays
  - h) Bacterial growth assays.
  - i) Immunoassays including ELISA.
6. Instrument should provide excitation from 200-1000 nm with 1nm steps.
7. Read out absorbance values should be upto 3 decimal points.
8. The instrument should have inbuilt incubation and linear shaking options for longer kinetic assays etc.
9. Precision in photometry should be SD<0.003Abs.
10. Accuracy in photometry should be 1.0% 0.003Abs
11. Light source should be xenon flash lamp or tungsten/halogen lamp.
12. Spectral scanning speed should be 10sec from 200 to 1000nm with 1nm steps per sample.
13. Monochromator accuracy should be 2.5nm or better and Xenon flash lamp life should be for 10 Million 96 well microplates.
14. Instrument should have a temperature controller from ambient +2°C to +45°C.
15. System should have Power Save function for reduced energy consumption when the instrument is 'on' but not in use.
16. Range of volume that can be read should be 2µl - 200µl.
17. Instrument should be able to work in a standalone mode.
18. Suitable data Analysis Software should be supplied with unlimited userlicense.
19. Visualize data in numerical mode and heat-map / virtual image of plate.
20. Software should allow multiple absorbance/photometry steps in a single program for differential analysis assays, including plate out option during the program to add required compounds and then continue the program for further analysis.

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21. Spectral scanning of all 96 samples or 384 samples should be able to view in single graph plot with data export in multiple file formats ( .pdf, excel, xml and note format) should be supported.
22. Standard PC should be provided along with the instrument.
23. Instrument should be provided with stabilizer and UPS.
24. User list of at least 5 similar installations in reputed institutes should be provided.
25. All the accessories required for installation and demo should be provided.
26. Warranty for a minimum of 5 yrs should be provided for all the parts and also for the entire instrument.
27. Warranty starts from the date of installation and on demand repair services as and when required should be provided.
28. Warranty details should be provided on manufacturer letter head.

### SPECIFICATIONS FOR DEEP FREEZER (-86°C)

1. Upright Ultra low temperature deep freeze -86°C of 350-500 liters capacity.
2. Operating temperature should be of -50°C to -86°C with 1°C increment.
3. Freezer must have a capacity to hold atleast 24000 (2 ml) vials.
4. Freezer should have 3-4 insulated inner doors with adjustable shelves.
5. Freezer must attain and maintain -86°C while operating at ambient temperature of 32°C with average uniformity of 4.8 °C
6. Fully programmable microprocessor controller with digital display should be present
7. Freezer should have Eye level control panel for at a glance monitoring.
8. Freezer should have high quality grade stainless steel interior and tough powder coated exterior finish constructed on steel.
9. Heavy-duty lockable castors and lockable outer doors and lids.
10. Front panel air filters should be removable and cleanable.
11. Freezer should use CFC-FREE, HCFC FREE non-flammable refrigerant compressor.
12. Audible and visible alarms system for unwanted temperature rise, sudden power failures, system failure, low battery, door open etc.
13. Freezers should have warm up time of 3-4hrs
14. Freezer must have battery backup for the display, alarm monitoring system and security lock for the display.
15. High density polyurethane foam insulation panel and silicon gasket on the doors for tight sealing
16. Freezer should be supplied with compatible voltage stabilizer with time delay facility.
17. Freezer must be provided with UPS.
18. Freezer must have ISO 9001- safety requirements and IEC 61010 Electrical safety CE certification.
19. Compressor should be capable to run at any voltage between 190 – 270V with high energy efficiency.
20. Freezers with low noise level and high energy efficiency are preferred.
21. User list of at least 5 similar installations in reputed institutes should be provided.
22. Warranty for a minimum of 5 yrs should be provided for all the parts and also for the entire instrument.

**TENDERER**

*[Signature]*  
**Coordinator  
 DST-FIST.**

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**DIRECTOR  
 DIRECTOR**

**INTU Institute of Science & Technology  
 Kukatpally, Hyderabad-85.**

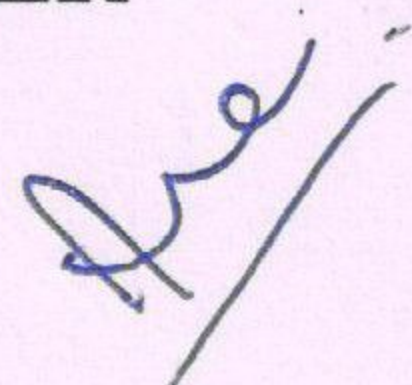


23. Warranty starts from the date of installation and on demand repair services as and when required should be provided.
24. Warranty details should be provided on manufacturer letter head.

### SPECIFICATIONS FOR RT-PCR

1. Multicolour real time PCR (with excitation and emission) for
  - a. Gene-Expression analysis,
  - b. Pathogen Quantitation,
  - c. SNP Genotyping,
  - d. Plus/Minus Assays that utilize internal positive control,
  - e. Dissociation Curve Analysis,
  - f. Multiplexing and complete End-Point Assays.
2. System should have a peltier based heating or cooling method
3. System should hold a sample capacity of 96 X 0.2 ml tubes or strips or plate.
4. System should support a reaction volume of 10 – 100  $\mu$ l.
5. Excitation source should be 6 filtered LEDs
6. Excitation and detection wavelength range should be 450-730 nm.
7. CCD/CMOS Camera based detection. The data collection and instrument control software should provide multicomponenting algorithm for deconvolution of multiple dyes, enabling addition of future dyes without changing the hardware.
8. The system should be readily configured and optimized for use of any of the following dyes or a combination of 2 or more dyes without any further change in the hardware.  
FAM/SYBR Green, VIC/JOE/HEX/TET, ABY/NED/TAMRA/Cy3, JUN, ROX/Texas Red, MUSTANG PURPLE, Cy® 5/LIZ<sup>TM</sup>, Cy®5.5
9. Six filters with minimum 5-6plex multiplexing (five-six targets in one tube).
10. System should be capable of running 2 to 6 individual programming in the same run with different set of temperature.
11. System should support a temperature range of 0 – 100°C
12. Max block ramp rate 6°C/sec or more with temp uniformity of 0.4°C and sample ramp rate of 3°C/sec or more.
13. System should have a sensitivity to detect single copy of target sequence in singleplex reactions.
14. Should support as a basic thermo cycler for gene amplification.
15. System should be capable of working as standalone system with on board memory of minimum 1 GB.
16. Application software should support absolute and relative quantification, allelic discrimination, plus/minus assays, HRM analysis, genotyping and mutation scanning analysis in all 96 wells simultaneously.
17. Additional software for dedicated primer and probe design should be provided.
18. A complete line of reagents including TaqMan universal PCR Master Mixes and SYBR® Green I Master Mixes, and disposables including tubes and 96-well plates for use with the system must be provided.
19. System should be compatible for use with third party consumables and kits.
20. Computer: A business line computer (either notebook or tower) should be provided with the system.

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21. The supplier should be able to supply all the reagents and consumables for the operation of the system.
22. The instrument has to be supplied with all the required accessories and start up consumables for 500-1000 reactions.
23. Installation, testing, validation and demonstration have to be done.
24. User list of at least 5 similar installations in reputed institutes should be provided.
25. The equipment has to be supplied along with appropriate stabilizer and UPS.
26. Warranty for a minimum of 5 yrs should be provided for all the parts and also for the entire instrument.
27. Warranty starts from the date of installation and on demand repair services as and when required should be provided.
28. Warranty details should be provided on manufacturer letter head.

### SPECIFICATIONS FOR FTIR

1. The spectrometer should be able to record the spectrum of a sample in the wavelength region of 300-8000  $\text{cm}^{-1}$ . The spectral resolution should be better than  $0.5 \text{ cm}^{-1}$ .
2. The spectrometer must include a user replaceable helium-neon laser/solid state Near IR diode laser as reference source.
3. The source should cover entire IR range with high intensity.
4. The infrared source must have a guaranteed lifetime of a minimum of 5 years, must be externally mounted and user replaceable.
5. The Interferometer should be of Michelson design, must be a dynamically aligned, non-air bearing/air bearing.
6. The system should be sealed and desiccated and must be equipped with  $\text{CaF}_2/\text{BaF}_2$  coated KBr sample compartment windows. The instrument must be equipped with the necessary internal plumbing and external connector for optional purge operation.
7. Standard warranty on the interferometer must be a minimum of 10 years.
8. The interferometer must permit insertion of a wide range of beam splitters without requiring replacement. Beam splitters must be available for the instrument to cover the spectral range at least from 25,000 to  $50 \text{ cm}^{-1}$ .
9. The instrument must be capable of at least 35,000:1 peak to peak signal to noise ratio, measured at  $4 \text{ cm}^{-1}$  resolution in the well proved standard region of 2200-2100  $\text{cm}^{-1}$ .
10. The spectrometer must be able to scan at a minimum rate of 50 scans per second.
11. The system should have DTGS detector to function at room temperature.
12. The spectrometer must support additional detector externally.
13. The system should have externally mounted user-replaceable power supply, windows and desiccants.
14. The warranty on laser should be minimum 10 yrs.
15. The instrument should be provided with optional ZnSe windows available for environments with excessive humidity.
16. The instrument should have rechargeable desiccant cartridges with humidity indicator.
17. The instrument should be provided with internal diagnostics for electronic humidity and heat sensors.
18. Automatic accessory recognition should be provided.
19. The instrument should analyze solid, liquid and gas samples.
20. Accessories required for analyzing solid, liquid and gas samples should be provided.

**TENDERER**

Coordinator  
DST-FIST.

*R. V. K. Gupta*  
**DIRECTOR**  
**DIRECTOR**

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Mysore, Hyderabad-85.



21. The instrument should be provided with suitable software with following features of
  - Atmospheric Vapour Compensation
  - Spectral Comparison
  - Multiple spectra Handling
  - Reporting - Customized templates, Notebook
  - Quant prediction for PLS, PCR, Beer's Law, CLS, peak ratio, and Discriminant Analysis
22. Automatic accessory detection and performance verification.
23. The instrument should be provided with suitable PC, UPS and stabilizer.
24. Installation, testing, validation and demonstration have to be done.
25. The supplier should be able to supply all the reagents and consumables for the operation of the system.
26. The instrument has to be supplied with all the required accessories for installation and demo and start up consumables for 500-1000 reactions
27. User list of at least 5 similar installations in reputed institutes should be provided.
28. A warranty minimum of 5 years for the entire instrument from the date of installation should be provided along with on demand repair services as and when required.
29. Warranty should be given on manufacturer letter head.
30. System should be compatible for use with third party consumables and kits.

NOTE: Basic essential specifications not mentioned should be present in the instruments.

**TENDERER**

*[Signature]*  
**Coordinator  
DST-FIST**

*[Signature]*  
**DIRECTOR  
DIRECTOR**

**IIIT Hyderabad**  
Institute of Science & Technology  
K. J. Somaiya, Hyderabad-85.



## BID PARTICULARS

1. Name of the Supplier :
2. Address of the Supplier :
3. Address of the Company :
4. Availability of demonstration of equipments : Yes / No
5. EMD enclosed : Yes / No if Yes  
D.D. No. \_\_\_\_\_ Bank \_\_\_\_\_  
Amount \_\_\_\_\_
6. Name and address of the Officer to whom all references shall be made regarding this tender enquiry.  
  
Name :  
  
Address :  
  
  
Telephone No.:  
  
Fax No. :  
  
Mobile No :  
  
e-Mail :  
  
Web :

**TENDERER**

*Dr. A. Uma*  
**Coordinator  
DST-FIST.**  
Dr. A. UMA  
Assistant Professor  
Centre for Biotechnology  
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*P. V. Suresh*  
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