

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Centre for Interdisciplinary Sciences

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Date: 26-12-2016

Notice Inviting Tender cum Tender Document (Two Part Public Tender) for the following items:

Supply, Installation, Commissioning and Training for Confocal Microscope system with accessories.

As per our technical specifications: Qty. - 1 No.

Public Tender No.	TFR/PD/IC16-613/0028
Published on	28-12-2016
Tender Fees	For Indian Supplier - Rs. 700/-
	For Foreign Supplier - USD 100
EMD	For Indian Supplier - Rs. 4,00,000/-
	For Foreign Supplier - USD 5900
Estimated Cost	Rs. 200.00 Lakhs
Last Date for Submission of Bid	24-01-2017 upto 13.00 Hrs.
Date of Opening Bids (Part A)	24-01-2017 at 14.00 Hrs.

Both Technical Bid (Part A) and Financial Bid (Part B) to be submitted within the due date and time in separate envelopes and marked on top as Part A and Part B. These two sealed envelopes should be further put in one Master Envelope super scribed with the Tender No., Due Date in Bold Letters.

Please see attached sheet for conditions of tender.

**ADMINISTRATIVE OFFICER
(PURCHASE SECTION)
TIFR-TCIS, HYDERABAD**

SCOPE OF SUPPLY - ANNEXURE A

Technical specifications for Supply, Installation, Commissioning and Training for Confocal Microscope system.

The system should be offered with the following components and configuration:

A. Microscope

- Motorized inverted confocal microscope for Bright field, DIC & Fluorescence.
- Motorized Z-focus drive with minimum z-step resolution of 25 nm or better with dedicated TFT/LCD screen for the control of motorized functions of microscope.
- Infrared (>700 nm wavelength) laser/LED-based Z focusing system for drift compensation in long-term time series acquisition.
- At least 6 position motorized fluorescence dichroic filter wheel & at least 6 position motorized nosepiece.
- High precision XY motorized scanning stage, and universal sample, 35 mm petridish, microscope slide, chamber slide and multiwell plate holders.
- Halogen/LED illumination for transmitted light illumination.
- Fluorescence lamp. Lamp illumination for fluorescence should have minimum life of 2000 Hrs.
- Confocal Grade Plan Apochromatic Objectives: 10X 0.4 NA, 20X 0.75 NA, 40X 0.8 NA – air objectives. 20X (water), 40X 1.3 NA (oil), 60/63X 1.4 or higher NA (oil), 100X, 1.4 or higher NA (oil) – immersion objectives. Small variability (≤ 0.15) on NA is acceptable, except for the 60/63X and 100X objectives. Higher numerical apertures may be offered. Objectives should work for the entire visible range of wavelengths. For magnifications less than 60X, Plan Fluor objectives may be offered if they are recommended over apochromatic objectives, or if apochromatic options are not available.
- Removable DIC prisms for all objectives and/or automated DIC turret, for DIC imaging.
- Fluorescence band pass filter sets for DAPI, CFP, GFP/FITC, YFP, TRITC/Alexa568, Texas Red, Alexa647 for fluorescence lamp illumination.
- An on-stage CO₂ incubator along with 35 mm petridish, chamber slide and multiwell plate holders with temperature and environment/CO₂ control and associated accessories, for live cell imaging. Live cell chamber should be a small stage-top one and fit onto the microscope stage, and be able to maintain cells at 5% CO₂ (using a standard

100% CO₂ cylinder) and appropriate temperatures. 35 mm plates should be held in place for long term imaging. Objective heaters if needed for oil objectives should be included. Live cell chamber should work with 35 mm dishes, multiwell plates and slides at the least.

B. Detectors, Scanners, Lasers, Photoactivation/FRAP, FCS units

- Point Scanning Confocal Device with a minimum of 4 detectors for imaging with simultaneous acquisition capability (not including detectors for FCS). At least two fully tunable inbuilt/separate standard detectors and two hybrid/GaAsP detectors with independent voltage and offset control are needed. Spectral imaging (or equivalent) capabilities are needed - fluorescence detectors for these should be filter-free with tunable emission band width detection capability to suit to the emission spectra of the dyes used.
- Scan Speed: Minimum 7 and upto 24 frames per second or better, full-field without digital zoom (full-field is 512X512 pixels or better).
- Pinhole: software controlled, continuously variable.
- Frame resolution: variable ROI, upto 4Kx4K pixels or better for all channels.
- Digital Zoom Range: Adjustable in steps of 0.1 or better, maximum zoom 40X or better, with a capability of fixed point continuous acquisition.
- Digitization: minimum 12 bit real time A-D conversion.
- Transmitted light detector for bright field and DIC imaging.
- Excitation Lasers:

Option 1 (preferred): Full solid state with the following wavelengths - 405 nm; 435/440/445 nm; 488 nm; 514 nm; 559/561 nm; 594 nm; 633/640/647 nm.

Option 2: Combination of gas (or diode) and solid state with the following wavelengths - 405 nm; 435/440/445 nm; 488 nm; 514 nm; 559/561 nm; 594 nm; 633/640/647 nm

The gas (or diode) lasers must be supported for the equivalent operational life as the solid state lasers (i.e. at least 10,000 hrs for each laser) - extra costs, if any, for this should be factored into the quote if Option 2 is offered.

Lasers and power supplies should be integrated into the system. Gas lasers may be acceptable if solid state laser options are not available from the vendor for a given

wavelength; diode lasers should be offered if and only if other options are not available. Some flexibility is allowed on the power output and wavelengths ($\leq 5\text{nm}$), but vendors should try to conform to the specifications set here. The 456 or 458 nm argon line is not acceptable as a replacement for the 435/440/445 nm laser line - it can be there, but the 435/440/445 nm laser should also be included for optimal CFP excitation.

- Capability for laser photo-activation/photoconversion, and performing fluorescence recovery after photobleaching (FRAP) experiments is needed.
- A module for performing high-sensitivity fluorescence correlation spectroscopy (FCS) with real time auto correlation (FCS) and cross correlation (FCCS) data acquisition and analysis capability, and steady state fluorescence anisotropy measurement experiments. The FCS detectors can be APD or PMA hybrid or GaAsP based, but should be sensitive enough to measure the diffusion of dilute solutions of GFP in water ($D=100 \mu\text{m}^2/\text{sec}$). APD based detectors should be offered if available, and are preferred - but other detector options will be considered too. Correlations should not be merely software based, but should be performed on a correlator-card based system. An objective designed specifically for FCS applications should be included in the quote. The FCS module should be integrated to the confocal acquisition software and hardware. All confocal lasers should be usable for FCS autocorrelation analysis; if specific filter sets are needed for this they should be included. For FCCS and anisotropy, at the very least, GFP-RFP cross-correlation and GFP fluorescence anisotropy be supported - ability to work with a wider range of fluorophores is desirable. Fluorescence lifetime measuring capabilities are not required at this point, but should be quoted as an optional item and be supportable in future upgrades.

The cost of the FCS module should be quoted separately from the rest of the system.

C. Computer, Software

- Latest computer workstation with software capable of controlling Motorized functions of microscope, scan head control, laser control including AOTF and Image acquisition & processing. It should have a Windows operating system, with at least 2 X 2000 GB HDD, 16 GB RAM, DVD Drive with a 4k/UltraHD compatible graphics card and display unit (minimum 32"). The PC should be tested at factory and supplied as a complete system. Higher/better specs if necessary are acceptable.

- Fluorescence Recovery after Photobleaching (FRAP) experiment capabilities should be a built-in feature of the system. ROI-s for FRAP should be definable at specific subcellular locations.
- Software for microscope control, confocal system control, with modules for ROI scan and bleach for FRET, FRAP, 3D imaging and reconstruction, time-lapse & co-localisation etc.
- Dedicated confocal 3D visualization software module to immediately open the multidimensional images like multichannel Z stack with time series. Multipoint imaging and stitching capabilities are required.
- One additional offline workstation with dedicated analysis software licenses with the above features is required.

D. Accessories

- Active imported anti-vibration table and a computer table should be supplied along with the confocal system.
- UPS system with 15 minute battery backup for the entire system is necessary.

E. Optional Accessories (not mandatory - and will not be counted towards final comparison, unless available from all vendors. May be procured in negotiations once the lowest bidder is identified, subject to being within the allocated budget.)

- Additional high speed scanner for Video Rate (24 fps) or better confocal imaging speed capability at full field.
- A confocal super-resolution module, capable of delivering XY resolutions down to 150 nm or better.
- Any upgrade necessary for performing fluorescence lifetime measurements.

F. Additional clauses

Warranty and service:

- The instrument and the workstation should be provided with at least a three year comprehensive warranty from the date of installation.
- The warranty should include regular maintenance, parts, labour and software updates and should cover the first three years.

- The maintenance costs for the entire system after the warranty period should be stated. Quotes should be provided for an annual maintenance contract after the three year warranty period.
- Lasers should be rated for the equivalent of ~10,000 hours or better life-time and the laser warranty should be independent of the confocal warranty. Replacement costs for any lasers rated for less than 10,000 hours should be factored in if the vendor goes for Option 2 (see 'Excitement lasers').
- A written contract of after sales service and technical support for 5 years should be provided. Immediate response upon system malfunction should be guaranteed.

Training: It is desirable that periodic training/demonstration classes at least once in every 6 months for new users are conducted for the duration of the warranty period.

Relocation of the equipment: Dismantling of equipment, Shifting/transportation of material from TCIS transit campus to TCIS, FReTB new campus, Reinstallation, calibration of equipment and successful commissioning is supplier's scope if any. However a separate quote for this relocation may be provided along with the financial bid with the minimum validity period of one year extendable further if required from the date of installation of the instrument. This quote will not be considered for evaluation of lowest bidder.

**Supply Order Details of Confocal Microscope system with accessories to
Other Firms**

Annexure - B

S.No.	Name of the company with full address	Name of the Project	Purchase Order No. & Date	Brief Item Description with Model No.	Item Value in Currency
Signature					
Name					
Designation					
Name of the Company					
Date					
Seal of the Company					

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

Centre for Interdisciplinary Sciences

21, Brundavan Colony, Gandipet Road, CBIT Post Office, Hyderabad - 500 075
(PURCHASE SECTION)

Terms and Conditions

1. **PART "A" (Technical Bid) consisting of Technical Bid with Commercial Terms and PART "B" (Financial Bid) consisting of only Price** shall be submitted in **separate** sealed envelopes duly superscribed with the tender enquiry number, and the due date in bold letters, addressed to the Purchase Officer, Tata Institute of Fundamental Research, 21, Brundavan Colony, Gandipet Road, CBIT Post Office, Hyderabad -500 075. The envelopes should be clearly marked on top as either PART "A" or PART "B".

The two sealed covers should be further put in a master cover superscribed with the Tender Enquiry No., Due Date in bold letters, addressed to the Purchase Officer, Tata Institute of Fundamental Research, 21, Brundavan Colony, Gandipet Road, CBIT Post Office, Hyderabad - 500 075. The sealed master envelop has to be delivered by hand/courier at the security Gate Office of TIFR-TCIS on or before 13.00 hrs. on the due date specified. The technical bid will be opened in the presence of attending tenderers at 14.00 hrs. on the due date at Purchase Section, TIFR-TCIS, Hyderabad. Tenders submitted after 13.00 hrs. on due date will not be considered.

2. **In case the PART "A" and Part "B" bids are not sealed in separate envelopes the tender will be rejected.**
3. The technical bid should not contain any indication of the price. The bidder should take special care not to mention anything related to pricing and costing aspect of whatsoever nature. The technical bid should include/contain only technical specifications, technical literature, drawing, quantity, manufacturing and delivery schedule, mode and terms of payment, mode of dispatch, the quantum and percentage of statutory levies payable by the purchaser as extra and all related commercial terms and conditions for the supply and for the services like erection and commissioning to be rendered by the tenderer. The details of the validity of the tender should also be indicated along with the commercial details.
4. After scrutiny of Technical Bids, Financial bids of only those bidders who are shortlisted on technical basis will be opened at on later date. The opening date, time and venue will be intimated to the technically successful bidder.
5. **Tender Document Fee:**
 - a) **For Indian Supplier:** Tender fee for **Rs. 700/-** (Non-refundable) in the form of D.D. in favour of "TIFR Centre for Interdisciplinary Sciences", payable at Hyderabad to be enclosed with the Technical Bid (Part - A).
 - b) **For Foreign Supplier:** Tender fee of **USD 100** (Non-refundable) in the form of advance cheque in favour of "TIFR Centre for Interdisciplinary Sciences", payable at Hyderabad to be enclosed with the Technical Bid (Part A).

6. **Earnest Money Deposit (EMD):**

- a) **For Indian Supplier:** Earnest Money Deposit (EMD) for **Rs. 4,00,000/-** in the form of D.D. in favour of "TIFR Centre for Interdisciplinary Sciences", payable at Hyderabad to be enclosed along with the technical Bid (Part - A).
- b) **For Foreign Supplier:** Earnest Money (EMD) for **USD 5900** in the form of advance cheque in favour of "TIFR Centre for Interdisciplinary Sciences", payable at Hyderabad to be enclosed with the Technical Bid (Part - A).

EMD shall be interest free and it will be refunded to the unsuccessful bidder without any interest. EMD will be forfeited if the bidder withdraws or amend impairs or derogates from the tender in any respect.

7. **Bidders who have not accepted the job/order awarded to them or withdrawn from the tender process OR whose EMD/Security deposit has been forfeited in the past their bids will not be considered and treated as ineligible / disqualified.**
8. After downloading the documents please inform your company details such as name, address, telephone nos., contact person and email address etc. by email to us. (harid@tifrh.res.in, srinub@tifrh.res.in) to enable us to inform prospective bidder for any corrigendum/changes if any; in the Tender document before due date.
9. Quotations must be valid for a period of 180 days from the due date.
10. Tenders containing correction, overwriting will not be considered. Late or delayed/Unsolicited quotations/offers shall not be considered at all. These will be returned to the firms as it is. Post tender revisions/corrections shall also not be considered.
11. Tenderer should sign on all the pages of the technical bid and the price bid.
12. The price quoted for Import item must be on following basis:
 - a) Ex-Work/factory duly packed airworthy/seaworthy and of international standard
 - b) FOB/FCA
 - c) CIF Hyderabad, Airport Port (all-inclusive i.e. Cost of Goods, Packing, Insurance, Inland transportation, freight etc.)

For local item /supply, offer should be on FOR basis (i.e. total landed cost for delivery at TIFR-TCIS, Hyderabad).

The dimension of the item (viz. H, W, L, weight etc.) shall be specifically stated and also mention whether the mode of shipping the item is Airworthiness / Seaworthiness or both. Accordingly the mode of shipment will be decided by TIFR-TCIS.

Price must be quoted in the Price Bid Format attached herewith as "Part -B" (Financial Bid).

13. If equipment offered is to be imported, arrangements for import will be made by us.
14. Tenders who do not comply with any of the condition are liable to be rejected.
15. The Institute shall be under no obligation to accept the lowest or any other tender received in response to this tender notice and shall be entitled to reject any tender without assigning any reason whatsoever.
16. TIFR reserves the right to place the order for part/reduced quantity than what is specified in the tender.
17. **PAYMENT TERMS:** 80% payment shall be made through irrevocable L/C on presentation of complete and clear shipping documents and balance 20% of the amount shall be released after the receipt, installation, commissioning and acceptance of the equipment and on submission of "**Performance Bank Guarantee (PBG)**" or "**Standby Letter of Credit**" for an amount equivalent to 10% of the Purchase Order Value. The PBG or "Standby Letter of Credit" shall be valid for a period of **60 days** beyond the date of warranty period. The PBG should be from State Bank of India & Associates (or) any one of the Nationalized Banks.
18. For Import cases: **No Agency commission will be paid as per Govt. of India rules.**
19. TIFR is exempted from paying of Custom Duty under the notification No.51/96 dated 23.07.1996, Excise Duty under the notification No.10/97 dated 01.03.1997, for all procurements/supply meant exclusively for Educational, scientific and research purpose. Whenever the exemption certificate not honored by the authorities, the applicable duty will have to be paid. Hence Excise & Custom duties, if any, should be shown separately.
20. **SALES TAX:** TIFR does not have any exemption/concession on payment of Sales Tax/VAT and we are not authorized to issue any Sales Tax Form 'C' & 'D'
21. **The Supplier shall arrange to ship the ordered materials within the mutually agreed delivery period mentioned in the order unless extended with/without penalty.**
 - a) In case of delay in supply on part of the supplier, a penalty @0.5% per week of order value will be charged for delayed period subject to a maximum of 10% order value.
 - b) If the delay in the shipment of the ordered materials attributable to the supplier exceeds agreed time period from the date of original agreed upon date of shipment and extended with/without penalty, the TIFR-TCIS, Hyderabad shall have the right to cancel the contract / purchase order and recover the liquidated damages from other dues of the party or by legal means. It will also affect the other/future business dealings with such suppliers.
 - c) The same rate of penalty shall be applicable for late installation of the equipment/instrument also.

22. **COMMENCEMENT OF WARRANTY PERIOD:** The warranty period of an item shall commence from the date of receipt of the item in good working condition and satisfactory installation/commissioning/demonstration at the project site.
23. **ANNUAL MAINTENANCE CHARGES:** The bidder must mention in the quotation, the rate/amount of annual maintenance charges, if we opt for maintenance contract after expiry of the warranty period.
24. Specifications are basic essence of the product. It must be ensured that the offers must be strictly as per our specifications. At the same time it must be kept in mind that merely copying our specifications in the quotation shall not make the parties eligible for consideration of the quotation. A quotation has to be supported with the printed technical leaflet/literature of the quoted model of the item by the quoting party/manufacturer.
25. **OBSERVANCE OF LOCAL LAWS:** Wherever applicable (particularly for Local vendors), the vendor / contractor shall comply with all law, statutory rules & regulations etc. The vendor/ contractor shall obtain all necessary permits / approval from the local Governing Body, Police, and other concerned Authorities as may be required under law. The vendor /contractor shall pay all types of taxes, fees, license charges, deposits, duties, tolls, royalty or other charges that may be leviable account of any of the operations connected with the execution of this work/ contract.
26. In case of any interpretational issues arises in this tender, the interpretation/decision of TIFR TCIS shall be final and binding on the bidder.
27. It is the responsibility of the vendor to make sure that the system being proposed can be exported to India with TIFR TCIS as the end user. All clarificatory documentation must be submitted with the Bid.
28. TIFR TCIS reserves the right to ask for or to provide any clarification, changes after the release of this tender. Any changes or clarifications provided by TIFR-TCIS, Hyderabad may be checked at TIFR-TCIS website: <http://www.tifrh.res.in/index.php/commercial-tenders>

**ADMINISTRATIVE OFFICER
(PURCHASE SECTION)
TIFR-TCIS, HYDERABAD**

Financial Bid for Confocal Microscope system with accessories (Part - B)

Annexure - C

TIFR- TCIS Enquiry No & Date: _____

Due date: _____

Bidder's Quotation Ref No. & Date: _____

Financial Bid (Bidders must quote their rates using this Format)

S.No.	Item Description as per tender	Make/Brand/ Type	Qty.	Rate per unit (Currency)	Basic Cost of main item (In Currency)
A.					
B.	Ex-Works cost (Duly packed Airworthy/Seaworthy of international standard)				
C.	FOB /FCA Cost (Name of Airport_____)				
D.	CIP/CIF Cost (Upto Hyderabad Airport)(all inclusive i.e. Cost of Goods, Packing, Insurance, Inland transportation, freight etc.)				

Note:

1. All the column should be appropriately filled and not left blank.
2. Do not include any other charges, taxes, duties etc. in the Basic Cost of the item.
3. Any accessories, optional items should be shown separately using above format.
4. Use separate sheet for detail description, specification of the item, but prices should be quoted in same format.
5. Prices quoted in Indian Currency should be on F.O.R. basis and mentioned separately using different table format showing all the applicable taxes/Duties like Excise, VAT, service Tax, Freight & Transportation charges and installation charges etc.
6. TIFR-TCIS being educational & research institute, discounted price shall be offered.

Signature of the Bidder

Name, Address contact no _____

& email id of the bidder/ _____

Company with company's Stamp or Seal _____

Date: _____

Place: _____