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Date: 17/05/2017

ADDENDUM-II TO IFT NO

No: IISER/PUR/9524/16

Sub: Supply of Inverted Laser Scanning Confocal Microscope with Super resolution module.

The Technical Specifications of the above referred IFT is hereby replaced/Amended with the Annexure I (enclosed herewith) instead of existing.

Also, please note that the Due date for submitting quotation is extended to 15th June 2017 [4PM].

Date of Opening Quotation is 16th June 2017 [3PM].

All other T&C of the IFT remains unchanged

Thanking You,

Yours Faithfully

18/05/2017

Deputy Registrar (I/C)
Purchase & Stores

Inverted Laser Scanning Confocal Microscope with super resolution module

Specifications:

1. **Fully motorized Inverted microscope with focus drift compensation**

System should have Bright field. Fluorescence and DIC illumination with accessories for Confocal scan head attachment and drift compensation mechanism. Programmable motorized X-Y scanning stage, Universal sample holders for slides, 35/60 mm Petri dish, labtek chambers with multipoint, tile and mosaic imaging software. A fast piezo focusing stage insert for z stack imaging with travel range of 100 microns or better

System should include a minimum of 12v/100w halogen illumination for transmitted light

System should be supplied with high resolution confocal grade plan apochromat objectives 4x, 10x, 20x, 40x, 60x/63xoil and 100x oil immersion.

System should have a minimum of 120w/130w metal halide or mercury lamp with 2000 hours of lamp life for fluorescence observation and motorized shutter for both bright-field and fluorescence path.

System should be equipped with Onstage CO_2, and humidity control incubator for live cell imaging, which can hold petriplate & multi-well plate of standard size and dimension.

DIC attachment motorized for 10x to 100x objectives with analyzer and polarizer attachment, sliders and modules for the respective objectives

The manufacturer/supplier should provide a suitable active anti-vibration table along with the

System.

2. A hard-ware based super resolution imaging approach based on structured illumination or comparable technology

The super resolution mode should include all lasers and optics for covering conventional fluorophores and/or fluorescent proteins like DAPI, EGFP/ ECFP/ EYFP/ DsRED , Alexa 645 etc. The minimum required laser lines are 405nm, 488 nm, 561nm and 640nm

All the visible laser lines should be controlled through AOTF for laser attenuation and

Switching in synchronization with scanner

Capable to Resolve X-Y appr. Upto 100 nm.

Capable to resolve Z appr. Up to 320 nm.

System should have observation modes as 2D- 3D-Super resolution imaging for both live and fixed cell application

Good Temporal Resolution for performing live cell imaging in super resolution mode to study of dynamic interactions.

Additional objectives. TIRF Imaging module with special objectives Plan Apochromat 100x (1.46 N.A) & Plan Apochromat.60x Water.

3. A Confocal scan head and detection system should be offered with the following specification

Laser point scanning and confocal detection unit with detectors (4) out of which high sensitive GaAsP detectors minimum of two numbers. Detection unit should be capable of working in Intensity and Spectral mode Imaging. Should be capable of simultaneous detection and separation of minimum 4 fluorophores or more based on Scanner unit should have laser ports for Vis, UV and IR lasers. An additional transmitted PMT for laser based DIC imaging should be included. Visible Laser Set with AOTF containing the laser lines Multi Argon (30mW or better) – 458nm, 488nm & 514nm. DPSS 561nm, & HeNe 633/640nm preferably higher mW for all Laser. Solid State lasers of similar power and equivalent/ nearby Wavelengths also would be considered. UV – 405/408nm (50mW or higher) Imaging and ROI capability for photo-activation and bleaching. All visible & UV lasers should be connected to the scan head through fiber optic cable and should be controlled through AOTF for fast laser switching and attenuation in pixel precise synchronization with the laser scanner for Real ROI scan for FRAP, Photoactivation/conversion experiments.

4. Suitable Computer Workstation (to be supplied from principal company)

5. Controlling and Analysis Software

Should control all the motorized hardware supplied with ability to perform ratio imaging and advanced analysis options.

3D deconvolution softwares (for the system and for offline analysis)

Suitable (10 KVA) UPS with 30min back up and table/rack for the system.

Active anti-vibration table

Five years comprehensive warranty for all parts including lasers.

Three years post-warranty AMC should be quoted separately.

Vendor should be responsible for dismantling the whole system at transit campus at College of Engineering, Trivandrum and reinstallation at permanent campus in Vithura.

18/08/2012

General conditions:

- On-site training after installation including wet lab use should be provided free of cost by application specialists and trained engineers. The vendor must ensure intermittent application training for the first six months after installation of the system
- The vendor must ensure at least two one-week long training courses per year for a period of three years.
- Service training for the day-to-day maintenance and service of the instrument with complete hands-on training should be provided
- Vendor/authorized representative should have their own trained support team to provide application support as and when required for the warranty period
- Instrument must be attended to in 48 h in case of breakdown. Replacement of imported components must not take more than three weeks
- List of essential spare parts and standards with price for trouble free operation need to be listed
- Documentation. All manuals like operation, service and maintenance with all electronic circuit diagrams to be provided
- Prices of all individual items/components must be quoted

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