Global Tender Notification for the procurement of "Confocal Microscope with Live Imaging setup" at the Indian Institute of Science, Bangalore
(TENDER FROM FOREIGN & INDIAN VENDORS)

Date: 25/04/2023

Last date of submission of tenders: 07/05/2023

To Whom It May Concern

This Global tender is being sought for a highly sensitive spectral confocal microscope wooth live imaging setup. The quotation should be valid for 90 days for the equipment supply per the specifications described below. A quotation should indicate the terms and conditions of the vendor, delivery schedule, applicable taxes, payment terms etc. The Bid should be submitted in a single sizeable sealed envelope containing two separate sealed envelopes inside – one containing the "Technical bid" and the other containing the "Commercial bid" both of which should be duly signed. The Large envelope should mention 'Techno-Commercial Bid for Confocal Microscope' and must be submitted in person on or before 17:00 hours, 07/05/2023.

Please note:

1. Quote should come from Foreign/ International Original Equipment Manufacturer (OEM) or their Indian authorized distributor or Indian manufacturer.
2. The quotations should be in INR only.

Quote/bids should be addressed and submitted to:

The Chair
Department of Microbiology & Cell Biology,
Division of Biological Sciences,
IISc, Sir CV Raman Avenue, Bengaluru 560 012

TENDER SPECIFICATIONS

- The requirement is for a highly sensitive spectral confocal microscope.

The imaging workstation should include highly sensitive spectral confocal imaging for cell lines, tissues, and model organisms. The system should be available with the configuration as mentioned below:

A. Motorized Inverted Fluorescence Research Microscope:

a) Fully Motorized Inverted Fluorescence Research Microscope for BF/DIC/Fluorescence preferably with dedicated touch screen TFT display for controlling motorized components of the microscope.

b) X-Y mechanical stage with Universal sample holders for slides, 35/60 mm Petri dish, labtek chambers

c) LED / 12V 100 W Halogen illumination for transmitted light & 120W metal halide illumination with filters for DAPI, GFP and RFP

d) Motorized 6 position DIC nosepiece, Universal Condenser NA 0.55 or better with modules for DIC, 6 position fluorescence turret for accommodating fluorescent filters for sample visualization.

e) High precision Z-focus drive with step size of 10 nm or better.

f) High resolution confocal grade objectives of 10x/0.40, 20X (0.80) , 40x/1.30oil, 60/63x/1.40oil immersion.

g) An active anti-vibration table with compressed air damping, bread board table top with M-6 threading for the complete microscope system.

B. Spectral confocal imaging unit with highly sensitive detectors:

a) Laser point scanning and Confocal detection unit with 2 channels for simultaneous detecting 2 fluorophores in high sensitivity mode. Detectors should be capable of working in Intensity and Spectral mode Imaging. The system should be field upgradable for additional detectors.

b) Scanner unit should have laser ports for at least 4 lasers to be integrated with the system.

c) The scanner should have real "ROI" scan capability for fast scan. Maximum scan resolution should be at least 6Kx6K or better per channel and should reduce to 16X16 resolution.

d) Scan speed should be 7-10 fps or better @ 512x512 and should be able to increase up to 230 fps@512X16 or better.

e) The scan field diagonal should be min 20 mm or better. Scan Zoom range minimum 0.5X to 40X with increments of 0.1X. Scan rotation of 200 degrees or better should be available.

C. Solid State Laser module with direct modulation / AOTF control:

a) 405 nm,

b) 488 nm

c) 561 nm.

d) 640 nm.

All lasers should be connected to the scan head through fibre optic cable and controlled through AOTF / Direct modulation for fast laser switching and attenuation in precise pixel synchronization with the laser scanner for Real ROI scan for FRAP, Photo activation/conversion experiments.

D. Control computer and Monitor:

Latest 64-bit control computer with Intel Xeon Processor, DDR RAM 96 GB or better, HDD: 4TB SATA upgradable to 8 TB or better, DVD, SuperMulti SATA +R/RW, Graphics card 8 GB or better, Gigabit Ethernet, Win 10 64 bit , USB 2.0/3.0, Fire wire. Large 27" LCD TFT monitor.

E. System control and Imaging Software:

a) Software should be capable of controlling Motorised components of microscope, digital camera, confocal scan head, laser control including AOTF, and Image acquisition & processing for confocal and super-resolution imaging.

b) Saving all system parameters with the image for repeatable/reproducible imaging.

c) Line, curved line, frame, Z-stack, and Time series imaging capabilities.

d) Real ROI bleach for FRAP, Photo-activation/conversion experiments.

e) Standard geometry Measurements like length, areas, angles etc including intensity measurements.

f) Advanced 3D image reconstruction with rendering from a Z-stack image series.

g) Co-localization and histogram analysis with individual parameters.

h) Spectral un-mixing with fingerprinting to separate overlapping excitation/emission spectra of fluorophores.

F. Live cell Incubation system:

On stage incubation for maintaining live cell parameters including CO2 module, Heating and humidity control.

G. XY Scanning stage:

130 x 100mm scanning stage with suitable holders for different Petri dishes, Slides and Labtek chambers, and software module for stitching.

H. Realtime Online Hardware-based Super-resolution Imaging (optional):

a) Fully automated and motorized SR attachment with suitable high sensitive Detector for complete Vis Spectrum.

b) Lateral resolution of 90 nm or better and Axial resolution of at least 270 nm or better should be expected from the system. Online processing of data for SR Imaging should be part of the standard system.

c) Detection should be based on GaAsP (32 array based) or equivalent dedicated Detectors.

d) Should be able to perform live cell SR Imaging with frame rates of at least 15-20 fps @512X512 pixel resolution. All laser lines for Confocal Imaging should be used for imaging in SR mode.

e) Depth of imaging in SR mode should be up to 70 to 100 microns.

Terms and conditions:

- The validity period of the quotation should be 90 days
- Quote should come only from Foreign Equipment Manufacturers (OEM) or their Indian authorized distributor.
- The quotations should be in INR only.
- The Quote should include all costs, including transport, customs clearance, transport to the installation site, and complete installation.
- The quote should include a Warranty for three years from the installation date. Please also include warranty terms and other information on upgradation terms in the technical bid.
- Quote should support including annual refresher training every year for at least the first 3 years.
- The quotations should be submitted in two bids system, i.e., Technical bid, and Commercial bid, in separate sealed envelopes, put together inside a larger sealed envelope.
- The technical bid must include all details of the instrument's technical specifications and commercial terms and conditions, masking only the price component. Bill of materials, brochures, technical datasheets, and other documents may be enclosed to help evaluate the technical bid.
- Please provide a Compliance sheet and the technical bid, indicating any deviation from the technical specification described in the tender. **An incomplete Compliance sheet with missing information will be considered grounds for rejection.**
- The commercial bid must include the instrument's price in Indian currency, indicating break up of: Installation, commissioning, and training charges, including any incidental expenses, if any.
- Price of every line item in the commercial bid should be quoted along with the total quoted price for the instrument to be operational (fixed and ready to use) in our facility.
- The vendor should have a good track record of supplying at least 5 prior installations of the same machine in India (please include details) in the last three years.
- The vendor should have a team of dedicated engineers based out of Bangalore for application and service support.

- The lead time for the delivery of the equipment should not be more than 2 months from the date of receipt of the purchase order.
- If the goods are found to be defective, they must be replaced or rectified at the supplier's cost within 30 days from the receipt of written communication from us. If there is any delay in replacement or rectification, the warranty period should be extended.
- The purchaser reserves the right to accept or reject any bid, annul the bidding process, and reject all bids at any time to award construction without incurring any liability of the affected bidder or bidders.
- Please submit the proposal to the following address: The Chair, Department of Microbiology and Cell Biology, Indian Institute of Science, C. V. Raman Avenue, Bangalore 560012.
- It should reach us on or before 17:00 hours on 07/05/23.
- Upon submission of the Bid please inform by email to shashankt@iisc.ac.in and copy chair.mcb@iisc.ac.in. on 07/05/23.