

Open Domestic Tender Notification for the procurement of “Inverted Motorized Fluorescence Microscope for Live Cell Imaging” at the Indian Institute of Science, Bangalore (Last date of submission of tenders: 23 December 2021)

To whom it may concern

Terms and Conditions:

1. The quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
2. Quotation should be valid for 90 days
3. Quotation should clearly indicate the terms and conditions of the quotations, delivery, delivery schedule, entry tax, payment terms, warranty coverage etc.
4. Quotes should be submitted on or before 17:00 hours of 23 December 2021.
5. The quotations should be submitted in two bids system; i.e., Technical bid, and Commercial bid.
 - a. The technical bid must include all details of technical specifications of the instrument along with commercial terms and conditions masking only the price component. Bill of materials, brochures, technical datasheets, and any other document may be enclosed to help the evaluation of the technical bid. Please also include warranty terms and any other information on upgradation terms in the technical bid.
 - b. The commercial bid must include the price of the instrument in Indian/Foreign currency indicating break up of:
 - i. For goods:
 - i. Installation, commissioning and training charges, including any incidental expenses, if any.
 - ii. Agency commission charges, if any.
 - iii. Provide certificates for country origin of manufacturing for each line item (this is a domestic tender only)
 - ii. 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.
 - c. Both the Technical and Commercial bid should be put in separate sealed envelopes, and put together in another cover stating, “Inverted Motorized Fluorescence Microscope for Live Cell Imaging”
6. The vendor should have a good track record of having previously supplied Inverted Motorized Fluorescence Microscope for Live Cell Imaging in India (please furnish details about the installation location(s)).
7. The vendor should have qualified technical service personnel based in Bangalore capable of servicing the equipment.
8. The quotations should be on Freight on Road (FOR)-IISc Bangalore basis in INR only
9. The lead time for the delivery of the equipment should not be more than three months from the date of receipt of purchase order.
10. Import code of the items should be indicated.
11. If the goods are found to be defective, they have to be replaced or rectified at the cost of the supplier within 30 days from the date of receipt of written communication from us. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

12. The purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time period to award of construct without thereby incurring any liability of the affected bidder or bidders
13. The bidder has to follow the Government of India guidelines mention in the OM No. P-45021/2/2017-PP (BE-II).

The tender should be submitted to:

The Chair

Center for Biosystems Science and Engineering
 Indian Institute of Science Bangalore-560012
 Karnataka, India

Technical Specifications for Inverted Motorized Fluorescence Microscope for Live Cell Imaging.

	Description	Specifications
1.	Microscope body	<ul style="list-style-type: none"> • Inverted motorized microscope with scanning capability in X, Y, and Z axis, automated axial drift correction system (hardware based) • XY motorized stage with multiple holders to adapt slides, Petri dish with glass bottom cover slips, multi well plates, Flasks etc • Dedicated vibration free external TFT/LCD touch screen capable of controlling all motorized functions of microscope. • Motorized Ergonomic Stand with inbuilt Z-focus drive with minimum step resolution of 50 nm or better. • IR based Laser/LED focus drift control module (hardware driven) for long term in-focus time-lapse imaging
2.	Transmitted illumination	Bright LED transmitted Illumination with intensity control through touch panel and imaging software
3.	Motorized Condenser	<ul style="list-style-type: none"> • Universal (suitable for all Microscopy Techniques) 6-7 position or more. Attachments, analysers, sliders, light rings, condenser and filters and polarizers to support bright Field, DIC, phase contrast and fluorescence microscopy and Koehler illumination for all objectives. • It should have phase rings for 10X, 20x 40X and 60/63X phase applications
4.	Upgradability	The frame should support future upgrades such as confocal, spinning disk & TIRF system.
5.	Nosepiece	Six positions motorized revolving nosepiece to accommodate objectives of different magnifications.
6.	Eyepiece	Tiltable binocular head with 10X F.O.V 22 or better eye pieces-2 nos

7.	Objectives	<p>High performance, Objectives suitable for Brightfield/Phase Contrast Fluorescence Observation</p> <p>10x: Plan Achromat N.A. 0.3 Ph1 or better 20x: Plan Achromat N.A 0.5 Ph2 ELWD or better 40x: Plan Achromat N.A 0.9 or better N.A 1.4 Ph3 ELWD or better</p> <p>60/63x: NA 1.25 or better- This objective must include a quarter wave plate (QWP) located in front of front lens. The QWP is optimized for a wavelength in the range 535-565 nm.</p> <p>*In case this objective with a quarter wave plate cannot be provided, a quarter wave plate below the objective nose piece must be provided. In which case, a demo is needed before purchase to establish functioning of the microscope for Reflection interference contrast microscopy.</p>
8.	Tiltable binotube	Three position prisms for (i) 100% observation, (ii) up to 50% shared camera port-eyepiece simultaneous viewing, and (iii) 100% camera viewing
9.	Live cell imaging	<p>Compact on-stage Incubator that works at 37 °C with complete temperature, humidity and CO₂ gas flow to maintain 5% CO₂ should also be provided as standard.</p> <ul style="list-style-type: none"> • Should take 100 % CO₂ with a regulator to control CO₂ flow. • Should include 2 cylinders and automatic switcher for them • Should include with suitable holders for 35 mm petri dish 60 mm petri dish, 96 well plate holders too.
8.	Filter turret	Motorized filter turret with at least 6 or higher filter position
9.	fluorescence light source	<p>Stable long-lasting LED/ solid state fluorescence light source with a guaranteed lifetime of minimum 20,000 Hrs with Fluorescence excitation capability for the dyes DAPI, FITC, mCherry and Far Red /Cy5.</p> <ul style="list-style-type: none"> • The LED light source should be completely controlled by the imaging software with an ability to control/select the desired LED lines and attenuation for fast sequential imaging.
10.	Fluorescence filter sets	<p>Fluorescence filter sets for UV/DAPI, GFP/FITC, TRITC/mCherry and Cy5 dyes to be quoted (low bandpass). 3 empty cubes to be included.</p> <ul style="list-style-type: none"> • A special reflector cube to be provided for reflection interference contrast microscopy: This reflector cube is composed of a polarizer, a semi-reflecting mirror and a crossed polarizer.

11.	Camera	<ul style="list-style-type: none"> Scientific grade CMOS camera with at least 85% or above quantum efficiency and with 6 μm pixel size with a maximum resolution of 2000 X 2000 pixels or better. C-mount adapter with larger FOV for sCMOS camera. The camera should be controlled by the same imaging software for fast multidimensional imaging applications.
12.	System control and application software	<p>Software for fully automated acquisition and the ability to control all parts of the integrated system comprising the microscope body, LED module, and sCMOS Camera.</p> <p>The imaging software should have the modules for 6D imaging, modular multi-dimensional imaging programming suites such as graphical experiment manager, JOBs or journals or similar modules, time lapse recording functions, video recording functions, automated multi-channel fluorescence capturing & merging, co-localization, wide-field real time 2D and 3D deconvolution feature, automated image stitching Interactive measurements, offline ratio analysis, cell confluency checker and high dynamic range imaging etc. Additional offline analysis licence will be required.</p>
13.	Computer Workstation	A suitable High-End Computer System for the imaging applications, RAM 64 GB or better, Dedicated graphic memory 8 GB or better, 1TB or better SSD ROM and 4TB internal HDD, with a 4K or better, 25 inch or larger monitor
14.	Image acquisition, analysis and software features	<ul style="list-style-type: none"> System must be provided with an acquisition software with multichannel, Z stack, Time Lapse, multi position and Stitching/tiling Applications. Two or More applications must be combined as per experimental requirements. For multi position imaging, different positions must be capable to register position specific Z stack imaging. Interactive and basic measurement such as Length, Angle, diameter, Area, Perimeter Gray value measurement along a line / Intensity measurement Statistical analysis and evaluation of Data. <p>An Extra analysis only license and a workstation for analysis</p>
15.	Image processing	Basic adjustment of brightness, contrast, and gamma; adjustment of color in BF images; correction of bleaching effect in Z stack images; pixel shift correction; Image smoothening, Image Sharpening
16.	Training and Warranty	Training and Warranty: On-site installation and technical training; 3-year complete system warranty + additional 2-year AMC
17.	Accessories	<ul style="list-style-type: none"> All the cabling and controls required to integrate all the parts and operate from the controlling computer to be quoted. Dust covers and all necessary accessories for the safety and protection of the microscope and their dependent parts.

		<ul style="list-style-type: none"> • All necessary accessories and control boxes, cords, clamps, cables, required to install, integrate, and operate the individual components listed above under sections A, B, C, D and E. 3. • For cell culture work, a trinocular inverted microscope with Phase Contrast system; LED illumination; Objectives-3, 10X/0.2 PLAN PH1 ,20X/0.3 PLAN PH1 and 40X/0.5 PLAN PH2 ELWD or better; two eyepieces, 10X/20; Long working distance Condenser with BF PH1, PH2 and a color camera to be supplied along with the system.
18.	Optional Items	<p>2nd camera: A high speed sCMOS (scientific CMOS) monochrome camera for biophysical and RICM applications</p> <ul style="list-style-type: none"> • The camera should be 6um pixel size with 2000*2000 pixel (or better) • acquisition speed 60 fps @ full resolution. • QE should be atleast 85% or better <p>Active Antivibration table or Anti vibration plates to host the microscope. Vibration isolation system should isolate Horizontal and vertical vibration throughout the critical frequency range.</p> <p>Peristaltic pump and media exchange system</p>

*The above-mentioned technical specifications are highly desirable. However, the Institute reserves the right to go for lower specifications taking into considerations its financial constraints and technical preferences.