NCCS

राष्ट्रीय कोशिका विज्ञान केन्द्र

National Centre For Cell Science

जैवप्रौद्योगिकी विभाग, भारत सरकार का स्वायत्त संस्थान

(An Autonomous Institution of the Department of Biotechnology, Government of India)

Ref: NCCS/S&P/PUR-09/2023-24

Date: 20/02/2024

Sub: Corrigendum.

With reference to the **Tender No. NCCS/S&P/PUR-09/2023-24** published on NCCS Website and CPPP for procurement of **"INVERTED FLUORESCENCE MICROSCOPE"** and the subsequent Pre-Bid Meeting held through Online on 09/02/2024, all the prospective bidders are hereby requested to go through the **modified/amended technical specifications attached herewith as Annexure A** for information and needful. Procedure

Due date for submission of bids has been **extended up to 04/03/2024 up to 2 PM and the Technical Bids received will be opened at 2.30 PM on the same date.**

Please note that all other Terms & Conditions mentioned in the Tender Documents will remain unchanged.

G. Harikumar 20/02/2024

Mr. G. Harikumar
In-Charge (Purchase)

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Annexure – A

1.Amended Technical Specifications:

Sr. No	Technical Specifications as per the Tender Documents.	Amended/Modified Technical Specifications.
1	**Microscope Frame With Control Unit:** The system should supply with intermediate magnification changer 1.5X, manually switchable (magnification detection)(exchangeable from 1.5x to 2.0x). Built in Bertrandlens linear-scaled, motorized extra-fine/fine/coarse focus equipped with focus knob with rotary encoder, escape (for anti-collision) and refocus mechanism ,laser safety interlock signal output, Equipped with side port adapter x2, side port cap x2, cover for blocking ,the stray light, toolset (2mm hex driver x2, 4mm hex key x1, 3mm hex key x1), plastic cable clamp x2, Vinyl Cover Type 108, controller for microscope (control box for microscope and motorized components., 4-AC AC Adapter, Power Cord BI (Qty 2) , USB2.0 Cable AB Type 3m, Pillar for Dia Illumination and instruction manual. Light distribution: 100 Eyepiece, 100 Left port, 100 Right port and eyepiece 20%/left 80%. Also system should compatible with 230V ± 10V, 50Hz.	Microscope Frame With Control Unit: The system should supply with intermediate magnification changer 1.5X, manually switchable (magnification detection)(exchangeable from 1.5x to 2.0x). Built in Bertrandlens linear-scaled, motorized extra-fine/fine/coarse focus equipped with focus knob with rotary encoder, escape (for anti-collision) and refocus mechanism ,laser safety interlock signal output, Equipped with side port adapter x2, side port cap x2, cover for blocking ,the stray light, toolset (2mm hex driver x2, 4mm hex key x1, 3mm hex key x1), plastic cable clamp x2, Vinyl Cover Type 108, controller for microscope (control box for microscope and motorized components., 4-AC AC Adapter, Power Cord BI (Qty 2) , USB2.0 Cable AB Type 3m, Pillar for Dia Illumination and instruction manual. Light distribution: 100 Eyepiece, 100 Left port, 100 Right port and eyepiece 20%/left 80%. Or Microscope frame: Motorized Ergonomic Stand having inbuilt motorized Z-focus drive with Minimum step size of 10-15 nm or lower and dedicated TFT/LCD Touch screen (preferably inbuilt with microscope body) capable of Controlling all motorized functions of microscope. Frame should be onsite upgradable to IR laser based focus drif compensator mechanism for long term live cell imaging facility. Coded

		Magnifcation Changer (Magnifcation can be Changed from 1X, 1.6X to 2X). Also system should compatible with 230V ± 10V, 50Hz.
2	**LED Lamphouse:** Lamp House for Dia Illumination and Contrast Shield ELWD	**LED Lamphouse:** Lamp House for Dia Illumcnaton and Contrast Shield ELWD (optional)
3	**Stand Alone Controller:** Stand-alone control unit with push type buttons and focusing knobs	**Stand Alone Controller:** Stand-alone control unit with push type buttons and focusing knobs Or push type buttons for all motorized controls(Course & fne Z focusing knobs)
4	**Eyepiece Tube and Eyepieces:** Binocular tube, Eyepiece Tube Base Unit, CFI 10X W/Diopter adjustment (FOV 22mm) Qty 2, and Eyepiece Guard Qty 2.	**Eyepiece Tube and Eyepieces:** Eyepiece Tube and Eyepieces: Binocular tube, Eyepiece Tube Base Unit, 10X W/Diopter adjustment (FOV 22mm) Qty 2, and Eyepiece Guard Qty 2.
5	Nosepiece: Motorized DIC Sextuple Nosepiece equipped with nosepiece capx5, Joint cover for elevating section x1	Nosepiece: Motorized DIC Sextuple Nosepiece equipped with nosepiece capx5, Joint cover for elevating section x1 Or Nosepiece six or more positions motorized revolving nosepiece with Slot for DIC Slide/analyzer to accommodate six objectives of deferent magnifications at a time.
6	**Attachable Mechanical Stage With Adapters:** mechanical right or left hand stage with fixed handle, stage handle can be mounted on right back side or left front side, Stage size: 290 x 300 mm or more, Cross travel : 114(X) x 73 (Y) mm or more applied for slide glass, 35mm dish as well as multiwell plate as options , equipped with screw for X-axis stroke limitx1, screw for Y-axis stroke limit and Long Handle 240.5mm or more. In addition, stage stopper function is implemented for time-lapse or operation on stage. Also, system should have High position reproducibility Microtiter plate holder, 35mm dish holder can be inserted on incubator with dish for cell incubation, High position reproducibility Slide glass/slide chamber holder.	Attachable Mechanical Stage With Adapters: XY mechanical stage with multiple holders to adapt slide glass, 35mm dish as well as multiwell plate as options. In addition, stage stopper function is implemented for time-lapse or operation on stage. Also, system should have High position reproducibility Microtiter plate holder, 35mm dish holder and glass/slide chamber holder.
7	**Objectives:** Plan Fluor 4X N.A. 0.13, W.D. 17.20mm, Plan Fluor 10X N.A 0.30, W.D. 16.00mm,	Objectives: Plan Fluor 4X N.A. 0.13, W.D. 17 mm or more,

	Super Plan Fluor ELWD 40XC N.A. 0.6, W.D. 3.6-2.8mm Corr. 0-2.0mm, Super Plan Fluor ELWD 60XC N.A. 0.70, W.D. 2.61-1.79mm Corr. 0.1-1.3mm, DIC Slider 60X I, Plan Super Apochromatic Objective Phase Contrast 100XO/1.45, WD 0.13mm (Spring, oil immersion). Immersion Oil F 30CC, LWD Dry DIC Module.	Plan Fluor 10X N.A 0.30, W.D. 10.00mm or more, Super Plan Fluor ELWD or plan Flour 40XC N.A. 0.6 or better, W.D. 3.6-2.8mm Corr. 0-2.0mm, Super Plan Fluor ELWD or plan Flour 60XC N.A. 0.70, W.D. 1.5mm-2.0 mm or better, Corr. 0.1-1.3mm, DIC Slider 60X I, Plan Super Apochromatic Objective Phase Contrast 100XO/1.45, WD 0.13mm (Spring, oil immersion). Immersion Oil F 30CC, DIC Module for 60X
8	**DIC POLARIZER/ANALYZER/SLIDER:** DIC Polarizer and DIC Analyzer Cube	No Change
9	**Condenser:** Condenser Turret ,supplied with ND128 filter module x1, Blind module x1.position : 7 (4 for ϕ37mm, 3 for ϕ39mm) applicable observation method : BF, DIC, PH, , NAMC. LWD Lens for System Condenser Turret Unit N.A. 0.52 W.D.(O.D.) 30mm, PH1 LWD module, PH2 LWD module, and PH3 LWD module	Condenser: Condenser Turret ,supplied with ND128 filter module x1, Blind module x1.position : 7 (4 for ϕ37mm, 3 for ϕ39mm) applicable observation method : BF, DIC, PH, , NAMC. LWD Lens for System Condenser Turret Unit N.A. 0.52 W.D.(O.D.) 30mm, PH1 LWD module, PH2 LWD module, and PH3 LWD module Or Universal Long working Distance Condenser suitable for BF, Phase, DIC , NA 0.55 or belter Working Distance 27 mm or more
10	**LED Fluorescence Illumination Source:** Fluorescence LED Illumination System with low bleaching parameter with all necessary accessories	**LED Fluorescence Illumination Source:** Fluorescence LED Illumination System with low bleaching parameter with all necessary accessories
11	Motorized Epi-Fluorescence Attachment: Motorized Epi Filter Turret (6 or more Position motorized fluorescence mirror turret A non-click turret fitted with 8 mirror units delivers smooth, fast switching.), Daisy Cable L, Fixed Main Branch, EPI-FL Module, Circular Field Stop Slider, Illuminator	Motorized Epi-Fluorescence Attachment: Motorized Epi Filter Turret (6 or more Position motorized fluorescence mirror turret A non-click turret fitted with 8 mirror units delivers smooth, fast switching.), Daisy Cable L, Fixed Main Branch, EPI-FL Module, Circular Field Stop Slider, Illuminator Or Motorized fluorescence attachment with built in shutter and a minimum of 6-8 position filter cube slots for band pass interference fluorescent filters
12	**Fluorescence Filters:** 12A. B-2A Filter Cube consisting of: Excitation Filter EX470/40 Dichroic Mirror DM505 Barrier Filter BA510 12B. Fluorescence Filter Kit for mCherry	Fluorescence Filters: 12A. B-2A Filter Cube consisting of: Excitation Filter EX470/40 Dichroic Mirror DM505 Barrier Filter BA510 12B. Fluorescence Filter Kit for mCherry

	Excitation filter 542-582nm Dichroic Cut-On Wavelength (nm): 593; Emission Wavelength (nm): 603 – 678 12C. DAPI Filter Cube / US consisting of :Excitation Filter EX361-389,Dichroic Mirror DM415,Barrier Filter BA430-490 12D. Fluorescence Filter Kit for CFP Excitation filter 426-450nm Dichroic Cut-On Wavelength (nm): 458; Emission Wavelength (nm): 467-498 12E Cy7 ZERO ,EX: 708/75 ,DM : 757 ,809/81 ,FISH Alexa750, etc 12F Triple Band Filter DAPI/FITC/mCherry (Texas Red) C-FL : EX; 407/14 494/20 576/20 DM : 446/468,520/540,614-642 BA: 457/22, 530/20,628/28 System should compitable to add 2 or more filter. Other parameters: Standard Empty Mirror units, Direct image video port and adaptor for camera. Filters should compitable for co-localization study.	Excitation filter 542-582nm Dichroic Cut-On Wavelength (nm): 593; Emission Wavelength (nm): 603 – 678 12C. Optional: DAPI Filter Cube / US consisting of :Excitation Filter EX361-389,Dichroic Mirror DM415,Barrier Filter BA430-490 12D. Fluorescence Filter Kit for CFP Excitation filter 426-450nm Dichroic Cut-On Wavelength (nm): 458; Emission Wavelength (nm): 467-498 12E Cy7 ZERO ,EX: 708/75 ,DM : 757 ,809/81 ,FISH Alexa750, etc 12F Triple Band Filter DAPI/FITC/mCherry (Texas Red) C-FL : EX; 407/14 494/20 576/20 DM : 446/468,520/540,614-642 BA: 457/22, 530/20,628/28 Other parameters: Standard Empty Mirror units, Direct image video port and adaptor for camera. Filters should compitable for co-localization study.
13	**Transmitted Light illumination System:** Tiltable Pillar with front condenser focus control knobs (transmitted 100watts pillar, cable, lamp house with High Color Reproducing (including cable), Interference green contrast filter, Frost Free filter and LED or Halogen lamp (12V 100W)	No Change
14	**HIGH RESOLUTION COLOR and MONOCHROME CAMERA:** Camera with 23.0 MP or higher High Resolution CMOS Camera , Color CMOS image sensor, Size: minimum 35.8 × 23.8 mm Recordable pixels: 6000 x 3984 Pixels or higher , Equivalent to ISO 200 (color mode) Equivalent to ISO 800 (monochrome mode)(Selectable from ISO 125 to 8000: in color / ISO 500 to 32000 in mono), All pixels (6000 x 3984): minimum 9 fps , Full HD 3x3 pixels average (1920x1080): minimum 66 fps, Exposure time: 100 µsec ~120 sec, 4-AC AC Adapter, POWER CORD TYPE BI and USB cable.	HIGH RESOLUTION COLOR and MONOCHROME CAMERA: Camera with 12 MP or higher High Resolution CMOS Camera , Color CMOS image sensor, fast frame rate of 9 frames per second or higher (fps) at over 4K resolution and 60 fps or higher at full HD resolution. All pixels (6000 x 3984) or higher Exposure time: 100 µsec ~120 sec, all the necessary accessories of camera
15	**Camera Adapters:** F-Mount Adapter, F-Mount Adapter for camera, F-Mount Adapter 2.5x for camera	**Camera Adapters:** C mount or F Mount Camera Adaptor
16	**Imaging Software:** Auto Research software, 6D experiment ability for capture, analysis, software for image analysis, FRET analysis, Time measurement, Live Compare, Advanced Interpreter Plug-in, , 3D restoration / volume	Imaging Software: Auto Research software, 5D-6D experiment ability for capture, analysis, software for image analysis, FRET analysis, Time measurement, Live Compare, Advanced Interpreter Plug-in, , 3D

	rendering / voxel view & slice view, overlay multiple images, co-localization analysis, batch conversion / processing, contrast base auto focus, Dynamic ROI for on line analysis, document groups for side by side image comparison, movie playback, Tile image, slice view for orthogonal plane viewing of 3D or time lapse data sets, snap /movie acquisition, time-lapse at specific intervals, Z stack, Manual Multiple image alignment (MIA), Instantly create Extended focal images (EFI), Live deblurring, Image processing, Image analysis, Count and Measure (Phases/regions), automatically compose word report. 6D imaging Plug-In(X, Y, Z, time, wavelength multipoint) including Plug-in compatible mode with other componets of software. 3D Deconvolution module software package (3D Imaging, Reconstruction and Deconvolution Option for Dimension) compatible with higher version of software.	restoration / volume rendering / voxel view & slice view, overlay multiple images, co-localization analysis, batch conversion / processing, contrast base auto focus, Dynamic ROI for on line analysis, document groups for side by side image comparison, movie playback, Tile image, slice view for orthogonal plane viewing of 3D or time lapse data sets, snap /movie acquisition, time-lapse at specific intervals, Z stack, Manual Multiple image alignment (MIA), Instantly create Extended focal images (EFI), Live deblurring, Image processing, Image analysis, Count and Measure (Phases/regions), automatically compose word report. 5D-6D imaging Plug-In(X, Y, Z, time, wavelength multipoint) including Plug-in compatible mode with other componets of software. 3D Deconvolution module software package (3D Imaging, Reconstruction and Deconvolution Option for Dimension) compatible with higher version of software.
17	Module for simultaneous imaging in Green (GFP) and Red (mCherry) Channel: OptoSplit II package P280/210/0LS Optosplit II emission image splitter (1xmagnification) Includes rectangular input diaphragm, calibration cube & one shutter plate, P290/000/200 Cairn emission / excitation filter cube for 25mm filters (Empty), P290/CR2/012 Optosplit II corrector lens kit (Includes 1 component holder), P290/ND2/006 Optosplit II neutral density kit (Includes 1 component holder and 4 ND filters), Filters for GFP/mCherry detection kit with all necessary accessories. Filters should compitable for simultaneous imaging in Green (GFP) and Red (mCherry) channel.	No Change
18	Computer / Workstation: Branded Desktop with Intel i7 or higher Processor, 128 GB DDR4 RAM or more, minimum 4 TB SATA drive, 2TB SSD, NVIDIA GeForce RTX2080 graphics card with minimum 11 GB RAM, Original 64bit Windows 10 OS, DVD RW, multimedia kit, minimum 32" 4K LED Monitor (QTY-2nos), keyboard, optical mouse with MS office package	No Change

19	Cover: Dust Cover	No Change
20	UPS: UPS with 30 Minutes Back up for entire system	No Change
21	Parts of microscope: All the parts of system should available for next 10 years.	No Change
22	Warranty: 3 Years including all parts and consumbles.	No Change
23	Training: 5 training session for students (Free of cost)	No Change
24	System should be upgradable for spinning disk module and dual deck system.	No Change
25	Microscope, camera and software should be from the same manufacture.	No Change

2. Due date for submission of bids has been **extended up to 04/03/2024 up to 2 PM** and the Technical Bids received will be opened at 2.30 PM on the same date.