



Date: - 15th November 2016

Corrigendum
for
Inverted Microscope for the Department of Pathology

NIT Issue Date	:	03 rd October 2016.
NIT No.	:	Admn/Tender/66/2016-AIIMS.JDH
Pre Bid Meeting held on	:	18 th October, 2016 at 11:30 AM
Last Date of Submission	:	24 th November, 2016 at 03:00 PM
Revised Last Date of Submission	:	05 th December, 2016 at 03:00 PM

1. The following revised and additional specification will be added:-

1. Page No. 10, Technical Specification, Point No. 1):

For

Inverted Frame: Motorized Ergonomic Stand with inbuilt Z-focus drive with minimum step resolution of 10-15 nm or better. The system should have a dedicated external TFT/LCD touch screen capable of controlling all motorized functions of microscope. The system should have an IR based Laser/LED focus drift compensator for long term in focus time lapse imaging controlled by both touch screen panel and imaging software at all magnifications.

Read

Inverted Frame: Motorized Ergonomic Stand with inbuilt Z-focus drive with minimum step resolution of 10-25 nm or better. The system should have a dedicated TFT/LCD touch screen capable of controlling all motorized functions of microscope. The system should have a continuous IR based Laser/LED focus drift compensator, in fluorescent mode, for long term in focus time lapse imaging for multiple positions controlled by both touch screen panel and imaging software at all magnifications.

2. Page No. 10, Technical Specification, Point No. 2):

For

Transmitted Light system: 12V100W Halogen Illumination with intensity control through touch panel and imaging software

Read

Transmitted Light system: 12V100W Halogen/LED Illumination with intensity control through touch panel and imaging software

3. Page No. 10, Technical Specification, Point No. 3):

For

Condenser: Motorized Universal Condenser (suitable for all microscopy techniques such as Phase, DIC) with 6 to 7 slots. It should have Phase rings for 10X, 20X, 40X and DIC prisms for 20X, 40X and 60X and 100X objectives. Automatic detection of phase ring.

Read

Condenser: Motorized Universal Condenser (suitable for all microscopy techniques such as Phase, DIC) with 5 to 7 slots. It should have Phase rings for 10X, 20X, 40X and DIC prisms for 20X, 40X and 60X/63X and 100X objectives. Automatic detection/selection of phase ring, DIC and motorised analyser should be a feature.

4. Page No. 10, Technical Specification, Point No. 5):

For

Nosepiece: Six positions motorized revolving nosepiece with Slot for DIC Slider/analyzer to accommodate objectives of different magnifications.

Read

Nosepiece: Six positions motorized revolving nosepiece with Slot for motorised DIC Slider/analyzer to accommodate objectives of different magnifications.

5. Page No. 10, Technical Specification, Point No. 7):

For

Objectives: High numerical aperture objectives suitable for bright field/ fluorescence/ DIC observation. Plan fluorite 10X with phase, Plan flour long working distance objective 20X phase with correction collar, long working distance plan flour objective 40X phase with correction collar & fluorescence, High NA Confocal grade plan apochromat objective 60X with oil (N.A 1.35 or higher UV-IR Corrected), plan Apochromat 100X with oil (N.A 1.40 or higher UV-IR Corrected)

Read

Objectives: High numerical aperture objectives suitable for bright field/ fluorescence/ DIC observation. Plan fluorite 10X with phase, Plan flour long working distance objective 20X phase with correction collar, long working distance plan flour objective 40X phase with correction collar & fluorescence, High NA Confocal grade plan apochromat objective 60X/63X with oil (N.A 1.35 or higher UV-IR Corrected), plan Apochromat 100X with oil (N.A 1.40 or higher UV-IR Corrected). All objectives, except phase, should work on focus correction drift.

6. Page No. 10, Technical Specification, Point No. 8):

For

Fluorescence Module: Motorized fluorescence attachment with built in shutter and a minimum of 6-8 position filter cube slots for band pass (Excitation and Emission) interference fluorescent filters FITC/GFP (Ex465-495, DM 505), TRITC/Rhodamine (Ex 540/25, DM 565,) DAPI/Hoechst (Ex 340-380, DM 400), separate florescence filter for YFP, CFP and Cy5 application should be quoted.

Read

Fluorescence Module: Motorized fluorescence attachment with built in shutter with a shutter speed of 30-70 milliseconds and a minimum of 5-8 position filter cube slots for band pass (Excitation and Emission) interference fluorescent filters FITC/GFP (Ex465-495, DM 505), TRITC/Rhodamine (Ex 540/25, DM 565,) DAPI/Hoechst (Ex 340-380, DM 400), separate florescence filter for YFP, CFP and Cy5 application should be quoted. Flourescent light path should be apochromatically corrected.

7. Page No. 10, Technical Specification, Point No. 9):

For

Fluorescence Light Source: Fluorescence Light Source 120/130 watts metal halide/Mercury lamp with 2000hrs life time (quote 5 spare bulbs) with Light intensity control. The light source should be alignment free/pre-centered to minimize human interference for alignment. The light source should be connected to the microscope with fiber (3m) to avoid direct heat transfer from the Mercury/metal halide lamp. The shutter and the attenuator for the light source be controlled & synchronized by imaging software for time lapse and multi-channel imaging. It should also be controlled by touch screen and software.

Read

Fluorescence Light Source: Fluorescence Light Source 120/130 watts metal halide lamp with 2000hrs life time (quote for two spare bulbs should be provided with a validity of five years after installation) with Light intensity control. The light source should be alignment free/pre-centered to minimize human interference for alignment. The light source should be connected to the microscope with fiber (3m) to avoid direct heat transfer from the metal halide lamp. The shutter and the attenuator for the light source be controlled & synchronized by imaging software for time lapse and multi-channel imaging. It should also be controlled by touch screen and software.

8. Page No. 10, Technical Specification, Point No. 10):

For

Camera:

- (i) A 2/3 inch pettier cooled 12.5 MP colour scientific CCD camera with minimum of 15 FPS for high resolution color imaging and
- (ii) 2/3 inch 1360x1024 1.4 MP, 6.45 um pixel, 14bit monochrome camera cooled to-10 deg for high sensitive fluorescence live cell imaging should be quoted.

A facility to image both color and fluorescence imaging in sequential mode for HNE and fluorescence image with super imposition should be a part of the microscope. The switching of monochrome and color camera to be done through motorized switching between cameras with 100% light distribution in both cameras for sequential imaging of monochrome (fluorescence) and color (HNE) imaging. The bidders can quote for single or two independent cameras meeting all above specifications.

Read

Camera:

- (i) Color camera- A 2/3 inch 10/12.5 MP colour scientific CCD/ CMOS camera with minimum of 15 FPS for high resolution color imaging and
- (ii) Monochrome camera- 2/3 inch 1360x1024 1.3/1.4 MP, 6.45 um pixel, 14bit monochrome camera cooled to-10 deg for high sensitive fluorescence live cell imaging should be quoted.

A facility to image both color and fluorescence imaging in sequential mode for HNE and fluorescence image with super imposition should be a part of the microscope. The switching of monochrome and color camera to be done through motorized switching between cameras or chip loaded in camera for dual function, with 100% light distribution in both cameras for sequential imaging of monochrome (fluorescence) and color (HNE) imaging. The bidders can quote for single or two independent cameras meeting all above specifications. Camera acquisition speed should be 25 frames or higher.

9. Page No. 11, Technical Specification, Point No. 11):

For

Software: The imaging software should have an advance multidimensional acquisition, camera control and controlling all function of motorized and coded functions of microscope. It should have automated count & measurement modules, time lapse recording functions,

automated five dimension imaging, automated multi-channel fluorescence capturing and merging , fluorescence unmixing, co-localization, wide Field basic De-convolution software module . Quote for 3D Blind deconvolution module in option. The software should have function of automated Multi Point/multi well time Lapse Imaging. Branded Data processing unit with i5/i7 Xenon processor with 8 GB RAM, DVD Writer, 1TB or higher HDD, 1280x1024 (min. 1024 x768) monitor resolution with Graphic card with separate graphics memory. PCI-Express x1.Compatible with half size or Low-profile PCIe board. Original Window 8 Operating System (64 Bit), Original Anti-Virus with CD, LCD Monitor 23-24 inches. UPS 2 KVA with 30 Minutes back up.

Read

Software: The imaging software should have an advance multidimensional acquisition, camera control and controlling all function of motorized and coded functions of microscope. It should have automated count & measurement modules, time lapse recording functions, automated five dimension imaging, automated multi-channel fluorescence capturing and merging , co-localization, wide hardware based optical sectioning technology. Quote for 3D Blind deconvolution module in option. The software should have function of automated Multi Point/multi well time Lapse Imaging. Branded Data processing unit with i5/i7 Xenon processor with 8 GB RAM, DVD Writer, 1TB or higher HDD, 1280x1024 (min. 1024 x768) monitor resolution with Graphic card with separate graphics memory. PCI-Express x1.Compatible with half size or Low-profile PCIe board. Original Window 8 Operating System (64 Bit), Original Anti-Virus with CD, LCD Monitor 23-24 inches. UPS 2 KVA with 30 Minutes back up.

10. Page No. 11, Technical Specification, Point No. 12):

For

CO2 Top Stage Incubator: comprising of Incubating chamber with glass heated lid, thermal controller, automated CO2 mixer to use 100% CO2 and deliver 5% constant CO2 output with a heated humidifying Module. It requires at least 35mm Petri-dish Plate, glass slide and 96 well plate adapters, Air pump and adapter for holding Incubator on motorized XY stage. Separate software for controlling all the above function of the incubator. The incubator should have multiple holes to accept the perfusion tubes and CO2.

Read

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11. Page No. 11, Technical Specification, Point No. 13):

For

ADDITIONAL ITEMS:

Fluorescence Light source: Long life (>15000 Hrs) precentred / prealigned bright white light LED light source directly coupled to the microscope with an inbuilt attenuation and shutter. The shutter and the attenuator be controlled & synchronized by imaging software for time lapse and multi-channel imaging.

A two channel peristaltic pump system with necessary electronics to synchronise with the acquisition to be quoted in option.

Read

OPTIONAL ITEMS:

Fluorescence Light source: Long life (>15000 Hrs) precentred / prealigned individual LED light source directly coupled to the microscope with an inbuilt attenuation and shutter. The shutter and the attenuator be controlled & synchronized by imaging software for time lapse and multi-channel imaging.

A two channel peristaltic pump system with necessary electronics to synchronise with the acquisition to be quoted in option.

Fluorescent un mixing software should be quoted if not available in the software provided in the equipment.

12. Page No. 11, Technical Specification, Point No. 16):

For

Should conduct onsite Testing & certification post-installation.

Read

The vendor should conduct onsite Testing & certification post-installation.

13. Page No. 11, Technical Specification, after point No. 16):

Added Point no. 17:

Microscope, camera and software should be from the same manufacturer.

**Administrative Officer
AIIMS, Jodhpur**