



Ref: AIIMSM-ADMN/PROC/2025/Upright Research Microscope with Bright Field, Phase and Fluorescence
Date: 29-12-2025

Call for Objection

Subject: Inviting comments/objection, if any before declaring proprietary article for procurement of "**Upright Research Microscope with Bright Field, Phase and Fluorescence**" for the Department of Anatomy, AIIMS Mangalagiri.

Anatomy Department, AIIMS Mangalagiri has to procure "**Upright Research Microscope with Bright Field, Phase and Fluorescence**" through Proprietary Article basis.

The proposal submitted by M/s. **Quad Dimensions Microscopy Solutions- Hyderabad**, 11-6-97/1, Saroornagar, Hyderabad-500035, Telangana, India who are business partner of Carl Zeiss India (Bangalore) pw. Ltd the sole manufacturer /agents of the **Upright Research Microscope with Bright Field, Phase and Fluorescence**. Similar items manufactured by other firms(s) shall not be suitable for our purpose who are established and reputable manufacturer of this item along with Proprietary Article Certificate are attached & uploaded on Institute website.

The above documents are being uploaded for open information to submit objections, comments if any from any manufacturer/supplier before declaring proprietary article of the said equipment/items to be procured, within 10 days (i.e. 29-12-2025 to 07-01-2026) from the date of issuance/uploading of the notification.

The objection should be raised in the technical compliance sheet as enclosed in Annexure -I, if any Firm claiming suitability of their product with respect to specification mentioned.

The comments should be sent to the office of Procurement Cell, Room no: 2151, Logistic block at AIIMS Mangalagiri in a sealed envelope with above reference on or before (07-01-2026) up to 05:00 PM from the date of uploading on institutional website, failing which it will be presumed that any other manufacturer/vendor is having no comment to offer and case will be decided on merits.

-sd-

**AAO (Procurement cum Stores)
AIIMS Mangalagiri**

Technical specification

(Upright Research Microscope with Bright Field, Phase and Fluorescence):

1. The microscope should be upright with transmitted light path with Infinite Optical System and full Kohler stand
2. The microscope body should be equipped with two integrated “snap image button” which allow to acquire images and videos directly from the stand.
3. The microscope should provide an automatic mechanical shutter in the transmitted light path when fluorescence observation is used without need to manually insert a slider shutter to block phosphorescence from TL LED and should have an ECO Mode to maximize system lifespan.
4. The microscope should provide an active light manager with freely adjustable light intensity, suitable for all kinds of objectives once setup without need of individual adjustment of each objective for both TL and RL Applications
5. The Transmitted light illuminator in the microscope should be an integrated, high luminosity, encoded LED with 10W, with a color rendering index of at least 95 and an expected lifetime of more than 60,000 hours.
6. The microscope including the transmitted light LED shall provide the option to use a 100 W halogen lamp instead. LED and HAL compatible in one stand.
7. Must be having Bright field, Phase contrast and Fluorescence contrast. Upgrades from brightfield to other transmitted light contrasting techniques – dark field, PlasDIC and simple transmitted light Polarization should be possible.
8. The Mechanical stage with travel dimensions 75 X 50 mm or better. A dual specimen holder for one-hand operation.
9. The reflector turret should be manual, revolving (sliding), with at least 6 encoded positions. It should be suitable for reading fluorescence filter position for fluorescence LED light intensity memory functionality (and for metadata information)
10. The nosepiece should be manual, revolving, with 6 encoded, DIC Supported positions. It should be suitable for reading objective position for light intensity manager functionality and for scaling information.
11. There should be a provision for direct control of external FL light source via microscope stand without external power supply and external control unit.
12. Light source should be Solid-State Light source.
Type RGB-UV 4-channel fluorescence light source with integrated control unit for continuous brightness adjustment, quickly switchable and adjustable by stand.
 - a. Should be equipped with 4 solid state LED lamps. - Red (625nm) for excitation of Cy5, Alexa 631, TOTO-3 and similar dyes - Green (565nm) for excitation of Cy3, TRITC, DsRed and similar dyes - Blue (470nm) for excitation of eGFP, Fluo4, FITC and similar dyes - UV (385nm) for excitation of DAPI, Alexa 405, Hoechst 33258.
 - b. Light intensity changes should be motion control dependent. The light intensity of each fluorescence LED should be individually and continuously adjustable and memorized per objective and per filter set. The memory function shall be suitable for single- and multi-bandpass fluorescence filter sets.
 - c. The LED fluorescence light source should provide a visual status indicator which LEDs are in use or active.
13. The microscope should have a suitable filter set consisting of filters DAPI, GFP and CY3.

14. Binocular phototube with reversed image with 100%-0%/0%-100% splitting possibility between camera port and eyepieces. The inclination angle should be 30° at a field number of 23mm.
15. The Condenser should be achromatic-aplanatic 0.9 H D Ph DIC with front lens switchable on the left and right and should have 5-position modulator disk, 4 centerable positions with Ph1, Ph2, Ph3 and dark field stop 0.75. 1 bright-field position with aperture stop. Alternative use of up to slit diaphragms PlasDIC possible
16. The microscope should have 5X , 10X Ph1 , 20x Ph2 and Semi Apo grade objectives for 40x/0.75, 63x/1.25 and 100x/1.30 Oil
17. Camera : CMOS Sensor Pixel Count 5 Megapixel: 2,464 (H) × 2,056 (V)
 - a. Pixel Size 3.45 μ m x 3.45 μ m
 - b. Sensor Size 8.5 mm x 7.1 mm; image diagonal 11.1 mm, equivalent to 2/3"sensor format
 - c. Spectral Range Approx. 400 nm – 720 nm, coated Hoya C5000 IR Cut Filter;
 - d. Range of Integration Time 100 μ s to 4 s
 - e. Live Image 36 frames/s @ max 2,464 × 2,056 pixels
 - f. Digitization 8 and 12 Bit/ Pixel
 - g. Interfaces USB 3.0 SuperSpeed (5 Gbit/s)
 - h. Full Well Capacity (typical) 10,500 eReadout Noise (typical) 2.2 eCooling
Temperature stable at 25 °C for ambient temperatures between 18 °C and 30 °C
18. Software to acquire images through connected and compatible microscopes. Module Multi Channel to provide easy solution for acquisition of fluorescence and transmitted light images in independent channels. - acquisition of up to 4 fluorescence channels + 1transmitted light channel - multichannel view including image processing and report generation with MCF images.
19. Software should have provisions for basic measurements and other functions like direct processing, Manual EDF, Measurement, Panorama, Spectral unmixing, Acquisition Base (time series and multichannel) should be possible.
20. The microscope should include the above features with 5 Year warranty
21. The following local supplies should be provided along with microscope:
High end Desktop Work station- AMD Ryzen™9 7900 Processor (3.7 GHz up to 5.40 GHz), Windows 11 Pro 64, Memory: 32GB DDR5-5600MHz (UDIMM)- (2 x 16GB), graphic card: NVIDIA ® Ge Force RTX™4060 Ti 4GB GDDR6, First hard drive: 1 TB SSD M.2 2280 PCIe Gen4 Performance TLC, Second Hard drive: 2TB 7200rpm HDD 3.5" SATA, Wireless: WiFi 6E 2x2 AX & Bluetooth ® 5.1 or above, 34" FHD display monitor with integrated webcam, USB Calliope Black Keyboard and Mouse.

P-3FORM

(To be attached with P-2 form for Proprietary items)

AIIMS Mangalagiri

PROPRIETORY ARTICLE CERTIFICATE

It is certified that the Article/Equipment Immunofluorescent Microscope required in the P-2 form should be purchased from M/s Quad Dimensions. To the best of my knowledge, they are the sole agents/distributors of the sole manufacturers M/s Carl Zeiss India (Bangalore) Pvt Ltd.

No other make/brand will be suitable for our purpose for the following reasons:

- a. ZEISS Axioscope 5 microscope has encoded functions on nosepiece and reflector turret which will enable the software to automatically identify the magnification or filter in use resulting in error free metadata is crucial for post image analysis and publications.
- b. ZEISS Axioscope 5 has snap buttons on microscope stand improving the workflow for image acquisition and it helps in fast acquisition of sensitive samples which are prone to bleaching due to exposure to light.
- c. ZEISS Axiocam 305 camera has 36 FPS and can-do imaging in both B/W mode and color mode helpful for both FL-stained sample and brightfield samples. Better resolution of 5 MP with pixel size of 3.45*3.45
- d. Automated mechanical shutter for TL and RL helps to switch between TL mode and RL mode quickly without manual adjusting both intensity at a time.
- e. Light manager based on light intensity ratio - Once setup, users can adjust the light intensity of all objective positions easily. No need of individual adjustment of each objective.

These features are important for High end qualitative and quantitative imaging and to the best of knowledge are not available in any other product.

S. Krish 15/5/25
Signature of Indenter
with date and name
DR. KUSHORE SESHAM, MBBS, MD.
Assistant Professor-Department of Anatomy,
All India Institute Of Medical Sciences,
Mangalagiri-522 503, A.P.
Contact No. 9871862612.

Recommendation by HoD:

for Dr. Jyoti
HEAD OF THE DEPARTMENT
Department of Anatomy
AIIMS, Mangalagiri, A.P.
Signature of Head of Department/Section

N.B.: The indenter before recording the above certificate should satisfy himself that the article is genuinely of proprietary nature manufactured under patent laws.

Carl Zeiss Microscopy GmbH 07740 Jena,
Germany



**Carl Zeiss Microscopy
GmbH**

Carl Zeiss Group

Jena location
Carl-Zeiss-Promenade 10
07745 Jena
Germany

Phone: +49 3641 64-

Fax: +49 3641 64-

E-mail:

Your ref.:
Yours of:
Our ref.:
Date: 08.05.2025

Division/ Dept.: RMS

Dear Sir/Madam

Proprietary Nature Certificate

Certified that articles viz., Proposed by M/S Quad dimensions , a business partner of Carl Zeiss India (Bangalore) Pvt. Ltd., a 100% Subsidiary of Carl Zeiss Microscopy GmbH, for "ZEISS Microscope - Axioscope 5 with Axiocam 305 color camera , encoded features , automatic mechanical shutter , ECO mode , Light intensity manager and integrated snap buttons " are proprietary items of M/s. Carl Zeiss Microscopy GmbH, Germany, a Group company of Carl Zeiss, Germany

Upright Research grade Microscope Axioscope 5, being a proprietary technology of M/s. Carl Zeiss Microscopy GmbH, Germany, a Group company of Carl Zeiss, Germany have the below proprietary features:

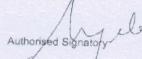
- 6 Position encoded DIC Nosepiece, 6 Position encoded reflector turret, integrated snap buttons, Light Manager
- LED and HAL Compatible in one stand, Upgradeable to PlasDIC with patent number: US9405111B2
- Direct control of external FL light source via microscope stand without external power supply and external control unit. The light intensity of each fluorescence LED is individually and continuously adjustable and memorized per objective and per filter set..
- Automatic mechanical shutter in TL for fluorescence imaging

2. *M/s. Carl Zeiss Microscopy GmbH, Germany are the sole manufacturer of these articles.*

3. M/s. Carl Zeiss India (Bangalore) Pvt. Ltd, is a 100% Subsidiary of Carl Zeiss, Germany and its partner M/S Quad Dimensions are responsible for sales and service of our products in Andhra Pradesh, India and Telangana, India

4. Certified further that no substitute make/ model will serve the purpose and that no other manufacturer can copy or produce these items in part or to to.

Yours faithfully
Carl Zeiss Microscopy GmbH


Authorised Signatory

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07745 Jena
www.zeiss.com/microsc
microscopy@zeiss.com

Supervisory Board:
Dr. Michael Kaschke
Board of
Dr. Markus Weber
Justus Felix Wehmer

Local court Jena, HRB
VAT Reg No: DE
Tax number: 50079/47619
WEEE Reg.-No.

Deutsche Bank AG Jena
Account: 620000000 (BLZ
SWIFT-BIC: DEUTDE8E831
IBAN:

Commerzbank AG Heidenheim
Account: 201114600 (BLZ 63240016)
SWIFT-BIC: COBADEF632
IBAN: DE26632400160201114600
Deutsche Bank AG Heidenheim
Account: 205068000 (BLZ 61370086)
SWIFT-BIC: DEUTDESS613
IBAN: DE32613700860205068000

ANNEXURE – I

SPECIFICATIONS

Objection should be submitted in following format:

S. no	Item specification as given	Specification offered by firm	Deviation if any	Remarks