Limited Tender Notice

On behalf of the Director General, CCRUM, New Delhi, the Deputy Director, RRIUM, Chennai invites sealed Limited Tender / Quotations from reputed firms in one bid system (Techno-commercial) for the supply of Trinocular Research Microscope with CMOS camera and Image analysis software. The detailed specifications of the instrument may either be downloaded from CCRUM website or may be obtained from the office of The Deputy Director, Regional Research Institute of Unani Medicine, Royapuram, Chennai.

The last date for receipt of Limited Tender Quotation is 26th February 2021 (Friday). For details please visit CCRUM website www.ccrum.res.in.

Deputy Director

SPECIFICATION FOR TRINOCULAR RESEARCH MICROSCOPE WITH CAMERA AND IMAGE ANALYSIS SOFTWARE FOR RRIUM, CHENNAI

1. **TRINOCULAR RESEARCH MICROSCOPE** (Upgradable to Fluorescence, Phase contrast and Dark field) - Microscope Infinity optical corrected system High intensity & Eco- friendly LED illumination with higher lifetime more than 60,000 hours. Microscope with Provision for bright and edge-to-edge uniform images can be obtained even at high magnifications with **Image capture button**

   Trinocular Siedentop f-type trinocular tube with light path selector of 100:0:100 (Eyepiece/Port); Eyepiece with Field of view 22/23 mm and Diopter adjustment facility on both the eyepieces; Nose piece with 6 fold or better; Focusing stroke: 30 mm, Coarse: 9.33 mm/rotation, Fine: 0.1 mm/rotation. Minimum Reading 1 micron, coarse motion torque adjustable, refocusing function and image capture button.

   Right Hand Stage holder with two specimen holder with refocusing stage mechanism. Cross travel 78 (X) × 54 (Y) mm, with Vernier calibrations, stage handle height and torque adjustable. Provision for stage height can be lowered 20 mm from the standard position.

   Abbe Condenser N A 0.9 and **Objectives (6 Nos.) -** 2X N.A 10 & W.D 30 mm or more, 4X N.A 10 & W.D 30 mm or more, 10X N.A 0.25 & W.D 7mm, 20X N.A 0.40 & W.D 3.90 mm, 40x N.A 0.65 & W.D 0.65 mm and 100X Oil N.A 1.25 & W.D 0.23 mm.

   Simple Polarizer with Analyser.

2. **DIGITAL CAMERA** – (**CMOS)**

   High Resolution, High Sensitive & High Speed Microscope Camera with CMOS image sensor; more than 10 megapixels; HD image upto 2880 x 2048 pixel; Image Sensor size: 1/1.8"; Exposure Time: 100µsec to 30 sec; Lens Mount: C Mount; High-speed live display; USB data transfer; Live images 30 fps.

   Higher quantum efficiency for more than 65% and lower readout noise for the capture of brighter images with higher S/N ratios in fluorescence observation modes. Excellent color reproducibility for imaging in various observations, suitable for bright field, DIC, phase contrast and fluorescence observation.

3. **IMAGE ANALYSIS SOFTWARE –**

Image Acquisition - including HDR and auto-calibration of magnification and Live HDR*1, and position navigation; **Image and Customization Tools -** Basic tool windows (Image history, properties, navigator, gallery view tool window); Annotations, layer management, scale bar, cross hair, info stamp display and image filters; **Measurements/ Image Analysis -** measurement of particle size (distance, angles, rectangles, circles, ellipses, polygons, circle-to-circle distance, angle ruler, and line ruler); data export to MS-Word and Excel for further modifications; Segmentation – Measure area fraction & volume fraction; **Image arithmetics** - 3D measurements, 3D profile measurements and 3D surface view; **Count and Classification** - Identification of objects in an image, classify and count them using several features; **Report creation** – Stream document storage; workgroup database with structured data format.

4. COMPUTER SPECIFICATION WITH COLOUR PRINTER -

Branded and latest version Desktop; Windows 10 home / professional, 10th Gen; i7 or i5 processor; 2 GB GDDR; 8GB DDR4 RAM; 256GB SDD; 1 TB SATA HDD; 24’ Monitor; Wireless Keyboard and Mouse; USB Slim DVD +/- RW Drive; UPS (APC 600); Laserjet colour printer.