Admn/Prop/58/2018-AIIMS.JDH Dated: - 19th December 2018

Subject: Upgradation of existing Binocular Microscope (BX43) for the Department of Pathology at AIIMS, Jodhpur on proprietary basis - **Inviting comments thereon.**

The Institute is in the purchase of Upgradation of existing Binocular Microscope (BX43) for the Department of Pathology at AIIMS, Jodhpur from M/s Applied Spectral Imaging Ltd, Yokneam High-Tech Park, Alon Building, Entrance B, 2 HaCarmel St., Yokneam 2069204, Israel on proprietary basis. The proposal submitted by M/s Applied Spectral Imaging Ltd, Israel and PAC certification by user are attached.

The above document are being uploaded for open information to submit subjection, comments, if any from any manufacturer regarding proprietary nature of the equipment within 21days of issue giving reference Admn/Prop/58/2018-AIIMS.JDH. The comments should be received by office of Administrative Officer, Medical College at AIIMS, Jodhpur on or before 11th January 2019 upto 03:00 PM failing which it will be presumed that any other vendor is having no comment to offer and case will be decided on merits.

Yours faithfully,

Administrative Officer

Enclosed: Related documents enclosed.

APPLIED SPECTRAL IMAGING

19 September 2018

PROPRIETARY CERTIFICATE

To:

The Administrative Officer
All India Institute of Medical Sciences, Jodhpur
Basni, Phase-II, Jodhpur-342005, Rajasthan

Ref. Your Requirement forFISH System

Dear Sir,

The purpose of this letter is to confirm that we, Applied Spectral Imaging ("**ASI**"), are the sole source manufacture of GenASIs platforms and reagents, specifically the Hi FISH System (collectively, the "**Products**"). We further confirm that the Hi FISH System is suitable for use with Olympus Microscopes. No other company is manufacturing and supplying the same proprietary Products with identical specifications.

M/s DSS Imagetech Pvt Ltd, is our exclusive distributor for **Rajasthan India** and is authorized to offer, sell and service the Products in the Territory.

This is to certify that the HiFISH System from ASI, quoted by our distributor M/s DSS Imagetech Pvt Ltd P.I. No. DSS/DL/PK/AIIMSJDPR01/2018 dated 18.08.2018 is an article of proprietary nature.

Sincerely,

Limor Shiposh, CEO
Applied Spectral Imaging Ltd

Applied Spectral Imaging Ltd.
Yokneam High-Tech Park, Alon Building, Entrance B, 2 HaCarmel St., Yokneam 2069204, Israel
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Specifications for Upgradation of Existing Olympus BX43 Microscope to FISH Workstation

1. Trinocular Head ,Fluorescence attachment along with FISH Filters-
   The system should be supplied with 8 Position Fluorescence Turret to accommodate 7 different FISH Filters & one empty Position for Bright Field studies along with 100 watt Mercury Illumination. The Trinocular Head of the Microscope should have 3 way light path distribution (0:100, 100:0 & 200:80) along with 22mm FOV.
2. FISH Filters- Following FISH Filters should be supplied – DAPI, FITC, TRITC, Dual Band for FITC/ TRITC, AQUA
3. Objectives
   1. 40X Semi- Apochromat/ Fluorite objective for Bright field & FISH Microscopy
   2. 100 X Oil Immersion –Semi- Apochromat/ Fluorite objective for Bright field & FISH Microscopy

FISH System-

1. **Acquisition System :**

A) Minimum resolution 4.0 Mega Pixels CMOS/CCD monochrome camera with 12 bit digitization depth. Acquisition of only required region.
B) Capturing by one mouse click and the whole process is performed under the same software platform.
C) Software system should select the best focus focal plane automatic and capture automatically.
D) Automatic camera and image capture control with manual override function.
E) Display optimization for maximum display contrast.
F) Automatic black level adjustment for maximum grey level resolution.
G) Focus with various cover slip setups.
H) Gigabit Ethernet Interface.

2. **Features for Database Management Software:**

A) Modern paperless laboratory design management software should be included. Software should manage data, compare chromosomes and produce comprehensive reports (customizable reporting services including both pre-defined reports and laboratory / user defined reports and can also compare various assays side by side in gallery.
B) Centralized server with better network accessibility and data integrity.
C) Multi Microscope Transformation Table
D) Support multiple languages.
E) Ability to migrate cases from various versions.
F) Ability to migrate cases from other systems.
G) Capable to integrate with LIS (Laboratory Information System) of the institute/organization.
H) Data access from any workstation in the network should be possible.
I) Ability to associate with any external documents (pdf,word,xmletc).

J) Dynamic access control through configurable user roles and permissions and should have specially designed data security.
K) Better control on flow and data protection by temporal lock of cell/slide/case as needed.
L) Search tool to filter specific cases by any field and/or subtext.
M) The Wizard utility creates a report from a freehand combination of chromosomes from any case/s and allows their enhancement with ideograms ,comparison etc.
N) Immediate image display in the image gallery.
O) Thumbnail images of RAW, Processed Karyotyped/FISH or completed images should be seen in database.
P) Any replaced or new metaphases should be updated in the gallery and in the database.
Q) Capable to export acquired image as clipboard image.
R) Capable to import external images.
S) Image processing history saved with date and time of each modification.
T) Multiple gallery options for comparison between same cases or multiple cases.
U) Ability to generate highly configurable customized reports (Word/PDF).
V) Easy and unlimited data archival and retrieval.

3. Features for FISH software:

A) Support for automated filter wheels.
B) Z-stacking even on manual microscopes is possible.
C) Up to 12 fluorochrome channels per image.
D) Handles metaphase, interphase and tissue samples with two, three or more probes.
E) Automated background correction.
F) Real time focus control.
G) Extended focus image generation from focus image series.
H) Immediate true color image display.
I) Easy combination of transmitted light and fluorescence information in color image.
J) Image registration of color components, automatic or interactive.
K) Annotation capabilities, text and arrows.
L) Distance and area measurement functions.
M) Integrated fluorescence intensity measurement.
N) Color modification and reassignment functions.
O) Multi function tools which eliminates the need for switching between other functional tools.
P) Interated with powerful bioinformatics management with simple,easy,quick and reliable manual analysis of FISH samples. Quality results leveraging double blind multiple technologists scoring.
Q) Full Karyotyping capabilities for karyotyping of FISH probes.
R) Exporting 3D scanned data for external 3D analysis and visualization.

4. Features for Fluorescence software:

A) Dual mode system to capture both Imaging and Hyper-spectral Imaging.
B) Precise and robust accuracy.
C) Single focusing.
D) Single button acquisition.

E) Accurate quantification of non specific staining.
F) Accurate background subtraction/correction.
G) Invariant to dye intensity variation.
H) Intuitive easy-to-use tools to analyze subtle rearrangements and complex translocations.
I) Interferometer based system for acquiring spectral data and its bandwidth should be under software control.
J) Multi function tool which eliminates the need for switching between other functional tools.
K) Spectral range: 400-1000 micron.
L) Spectral resolution of 6nm at 400nm.
M) Live view for focus with full spectral data. Simultaneous measuring of all wavelengths.
N) Extract quantitative per pixel information on molecular/stain content.

5. **CPU -** Compatible latest branded computer. The computer system should be Factory tested and would be part of the system supply only so that there are no incompatibility issues.
6. 24" Monitor & Colour Laser Printer should be supplied with the system.

NOTE –

1. The FISH Software should be FDA Approved
2. There should be harmony between the complete Hardware & Software
3. There should be a Provision to add Karyotyping in the system on Site.