IISER PUNE

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH

PUNE

CLARIFICATION ON TENDER NUMBER - IISER-PUR-1059-13

ITEM DESCRIPTION- PROCUREMENT OF A) WIDE-FIELD FLUORESCENCE SPECKLE IMAGING MICROSCOPE AND B) ENVIRONMENTAL AND HARDWARE BASED STABILIZATION CONTROL SYSTEMS

Please refer our Press Tender Notice No.IISER/S&P/13/13 dated 27.11.2013 for procurement of A) Wide-Field Fluorescence Speckle Imaging Microscope And B) Environmental And Hardware Based Stabilization Control Systems. Tender Reference Number – IISER-PUR-1113-13.

Pre-Bid meeting was held on 09th December 2013 at 2.00 PM and minutes of meeting is as under.

At the outset, the Chairman welcomed all the Members and the representative of the Prospective Bidders and briefed in general the scope of the Project and thereafter requested Assistant Registrar (S&P) to brief the vendors on the salient features of the commercial terms and the indenting Officer to read out the clarification sought by the Prospective Bidders and replied thereto as detailed in Annexure -II

The representatives present were satisfied with the replies given and it was informed that the corrections / additons / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of IISER Pune and all the Prospective Bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before submitting their bids as stipulated in the Bidding Documents.

The other terms & conditions of the notice issued on our IISER website www.iiserpune.ac .in will remain unchanged.No more correspondence in this regard will be entertained

The meeting ended with vote of thanks to the Chair.

Sd/-

9.12.2013 Assistant Registrar (S&P)

ANNEXURE -II

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PRE-BID CONFERENCE FOR PROCUREMENT OF A) WIDE-FIELD FLUORESCENCE SPECKLE IMAGING MICROSCOPE AND B) ENVIRONMENTAL AND HARDWARE BASED STABILIZATION CONTROL SYSTEMS

TECHNICAL QUERIES AND CLARIFICATION

TENDER NUMBER -IISER-PUR-1059-13 DATE : 9.12.13

S.No	Query/Clarification Sought	Clarification / Amendment
1	**Page No 23, Chapter 4, Point 9** Which objectives are required to be optimized for phase contrast?	**Page No 23, Chapter 4, Point 9** We require two phase contrast optimized objectives: 1) 40x (air) N.A. 0.6 2) 60/63x (air) N.A. 0.7 or higher These should be long working distance (d) lenses (40x d≥ 2.5 mm, 63x d≥ 1.5 mm) for live imaging of cells.
2	**Page No 23, Chapter 4** Specify the nature and quality of objectives, e.g. Plan Fluor or Plan Apo?	**Page No 23, Chapter 4** We requirethe following Plan-Fluor optimized objectives: 1) Objectives with magnifications 20x, 40x, 60/63x and 100x. 2) Numerical apertures of lenses to be as follows: 20x with N.A. ≥ 0.4

		40x with N.A. ≥0.6 60/63x with N.A. ≥1.25 (oil) 100x with N.A.≥1.3 (oil) 3)The objectives need to be optimized for low light fluorescence imaging planned
3	**Page No 23, Chapter 4** Is any scanner objective required (4x, 10x)?	**Page No 23, Chapter 4** Yes we would like to add a Plan Achromatic 10x 'scanner' objective, in ADDITION to the other lenses mentioned in the tender specifications (See point 1 above).
4	**Page No. 23, Chapter 4** More details about Focus Drift Control- is this required for thermal correction of stage which is normally available with all the research grade microscopes or to keep the sample in focus whenever media is added by opening the climate chamber while doing Time Lapse experiments?	**Page No. 23, Chapter 4** The requirement of Focus Drift Control is based on a need to keep the sample in focus due to sample activity, cell growth, change of media etc. As a result we require a HARDWARE-BASED solution for focus drift control. This drift control system based on optics (LED or IR laser) coupled to the xyz-position control of the microscope state should use some form of interferometry to compensate for drift. The tolerance of the control system is noted in CHAPTER 4, POINT B.2. These tolerances should match when the actual device is supplied and assembled.
5	**Page 23, Chapter 4** Is a shutter required?	**Page 23, Chapter 4** An electronic OR mechanical shutter, which can control cutout of light from either white or fluorescence sources in order to prevent interference between different light sources is required.
6	**Page 23, Chapter 4** Point A.5–Does the fluorescence light source have to be only a mercury lamp of 120W or higher or can it also be a metal halide lamp or an LED light source?	**Page 23, Chapter 4** The fluorescence light source should be Mercury lamp of power ≥ 120 W We do not want LED or Metal halide lamp light sources due to stability, wavelengthand intensity issues The deciding criterion for these alternative light sources will be that they excite the

		required ranges of fluorophores listed on PAGE 23, CHAPTER 4, POINT A.6 with minimal photo-bleaching and but bright enough illumination to be detected by a conventional monochromecooled CCD camera in speckle imaging (i.e. low fluorophore concentration) scenarios.Tuning of intensity to be accomplished through N.D. filters andeither electronic or aperture mechanisms.
7	**Page 23, Chapter 4, Point A.12** Clarification on camera specifications.	**Page 23, Chapter 4, Point A.12** We require a high-performance, monochrome, cooled CCD camera as follows: 1. The camera should have a full frame of ≥1.4 megapixels. At this full frame image it should be able to capture at a rate of≥10 frames per second (fps). 2. A 'high-speed acquisition' mode should be possible with adjustable binning. 3. Size of the pixel should be6.4 to 6.5micrometers (1D) per pixel. 4. A retractable IR barrier filter to be included. 5. Read noise ≤3e^- at 1 MHz (root mean square). 6. The dark current should not exceed 0.007 electrons/pixel/second (a lower dark current will be preferred) at minimum temperature. 7. The well capacity 17,000 electrons (margin of 2000 permissible) 8. Resolution should be user-adjustable. 9. Broad quantum efficiency of ≥40% for light of wavelengths ranging from 400 to 600nm.
8	**Page 23, Chapter 4, Point A.12** Clarification on camera temperature	**Page 23, Chapter 4, Point A.12** The monochrome cooled CCD camera should be equipped with a cooling system to keep it at ≤-40°C (Constant temperature)fan on cooling (≤-30°C fan off)temperature. Lowervalues will be preferred.
9	**Page 23, Chapter 4, Point A.11** Clarification on motorized stage and	**Page 23, Chapter 4, Point A.11** 1. The stage should be motorized in x, y and z directions (3 dimensional). The z-position control should be integrated with the XY control, based on existing

	concerning integrated z-movement.	specifications. 2. The stage movement resolution should be in X,Y= 0.2 micrometers and in Z= 0.03 micrometers or better (i.e. smaller resolution). 3. Minimal step size in XY = 0.1 micrometer and in Z = 1 micrometer. (or better i.e. smaller). 4. The travel range of the stage in XY directions to be 100 mm x 100 mm or greater and in Z-direction travel of 0.5 mm.
10	**Page 23, Chapter 4, Point A.16** (Optional) –What precise nature of deconvolution algorithms required?	**Page 23, Chapter 4, Point A.16** We require 3D deconvolution algorithms to be quoted (Optional).
11	**Page 23, Chapter 4, Point B.1** In the hooded environmental control system should CO2 also be controlled for the whole hood?	**Page 23, Chapter 4, Point B.1** CO2 control and humidity is to be implemented only on a stage-based insert to reduce complexity and volume of gas to be controlled. The enveloping hood is to be however controlled for temperature

ANNEXURE -III

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PRE-BID CONFERENCE FOR PROCUREMENT OF A) WIDE-FIELD FLUORESCENCE SPECKLE IMAGING MICROSCOPE AND B) ENVIRONMENTAL AND HARDWARE BASED STABILIZATION CONTROL SYSTEMS

COMMERCIAL QUERIES AND CLARIFICATION

TENDER NUMBER -IISER-PUR-1059-13 DATE : 9.12.13

S.No	Query/Clarification Sought	Clarification / Amendment
1	----------NIL ----------	----------NIL ----------