



Ref: NCB/F-222049/2022-2023 (N)

national centre for biological sciences  
tata institute of fundamental research

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February 1, 2023

**Addendum No:2**

- Ref.: 1) GEM Bid No.GEM/2023/B/2963754 dt.09/01/2023  
2) Tender Notice No: 013/2022-2023, 3) NCB/F-222049/2022-2023 (N)  
3) Addendum No.1 dt. 27/01/2023

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The following Addendum is issued to our Tender, under Reference No: 1) GEM Bid No.GEM/2023/B/2963754 dt.09/01/2023, 2) Tender Notice No: 013/2022-2023, 3) NCB/F-222049/2022-2023 (N) for revision in Annexure A – Technical Specification.

**FOR**

**ANNEXURE A – SPECIFICATIONS - In vivo Optical Imaging System**

**1.Application-** System should be able to perform high-sensitivity non-invasive whole-body imaging for mice and rat.

**2.In vivo optical imaging system:**

- In vivo optical imaging system for highly sensitive imaging system ideal for non-invasive monitoring of small animals such as mice, rat and zebrafish
- System should be capable of optical imaging such as bioluminescence and fluorescence.
- Number of animals to be imaged should be atleast 3 mice
- Should be complete system inclusive of light tight cabinet, CCD camera, excitation LED's and emission filters, sample stage, calibration device, computer workstation and gas anaesthesia system.
- System should be equipped with narrow band LED excitation wavelength of range 430nm- 745nm and Emission filters covering approx. 490 to 870 nm range.
- Fitted with minimum of 10 excitation wavelengths and minimum of 5 emission filters with a supply of extra 5 emission filters.
- Individual light sources (per wavelength) that fall within the 20nm excitation filter bandwidth.
- Fluorescence excitation source rated for 100,000 hours of illumination
- The illumination source should have significant performance advantage and the source should be LED arrays to provide better reliable, stable, excitation light
- Light source with user enabled excitation output control (per wavelength) from 1% - 100% in 1% variants
- Emission filter wheels should be motorized, and software controlled. Excitation filter Range: 420nm to 755nm & Emission filter Range: 480nm to 880nm.
- Minimum FOV: 5x5 cm to Max FOV 13 x 13 cm to enable imaging of 3 mice
- Quantum efficiency: >85% for 500-700nm range & >35% efficiency 700-900nm for maximum light (event) recognition
- Should be equipped with back thinned, back illuminated grade 1 CCD, thermo-electrically cooled CCD to at least -90°C, absolute.
- Minimum Pixel resolution: 22.5 (µm). Image Pixel: 1024 x 1024.
- Solid-state, twin-fan, -90°C absolute CCD camera that is thermoelectrically air cooled - without the use of any liquid or gas support to provide highly reliable, stable, cooling with no possibility of failure from leaks
- CCD dark current of 100 e-/sec/cm<sup>2</sup> or less and low noise
- Minimum Detectable Radiance of better than 60 photons/sec/cm<sup>2</sup>/sr
- Software should have all major functions like acquisition, multiple-image, group analysis, and region of interest analysis.
- Stage temperature should be controllable between 20-40 degree C approx.
- Easy to use image acquisition and analysis software with features of spectral-unmixing and anti-glare functionality.
- The company should have multiple installations of systems in Worldwide. Provide list of reference installations in Worldwide.





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- Data generated should be in absolute calibrated data according to the National Institute of Standards and Technology (NIST). Absolutely Calibrated System.
- Software should be compatible with the Animal Imaging System with following features:
- Easy to use image acquisition and analysis software with features of spectral unmixing.
- Easy to use image acquisition with Smooth Blend and Smart Auto Exposure imaging features.
- Unlimited free copies of licensed software for data analysis should be provided.
- Should be integrated Instrument and Image Acquisition.
- Should include Toolset for 2D Fluorescent Imaging and 2D Bioluminescent Imaging.
- User-Friendly Image Manager Productivity Tools. Export to 2D DICOM, TIFF, bmp, jpeg, png Image format.
- Systems should come with Imaging Calibration Device
- A windows PC with licensed operating system, 24 inches TFT high resolution monitor, 1TB HDD, 4GB RAM, CD/DVD/combo reader/writer also needs to be supplied
- System should provide with isoflurane gas anesthesia system as integral component to support work flow before and during the scanning procedure.

### 3. Warranty, service support and other conditions:

- The company should provide a comprehensive plan for on-site training, conducting workshops and software upgrade (if available) every six months during warranty period.
- Company should provide free of cost training within first 3 months after installation to multiple users unless agreed on later dates.
- Trained engineer & application support within India should be available for onsite training & support.
- The company should provide performance proof of similar scope of work in Asia-Pacific or Globally.
- The supplier should be able to provide list of few installations of Individual Instruments.
- The equipment and all accessories must be provided with a comprehensive on-site warranty for 2 years (24 months) including spare parts and labor.
- Warranty will start from date of successful installation.
- During the Warranty period, the supplier is required to visit at consignee's site at 2 times in the year commencing from the date of the installation for preventive maintenance of the Equipment/Stores.
- The Supplier shall ensure continued supply of the spare parts for the machines and Equipment supplied by them to the purchaser for 10 years from the date of installation and handing over. Company should ensure that spare parts will be available till 10 years from the installation.
- Should attend all breakdown calls within 24 hours of the receipt of information from the institute through fax/e-mail/mobile/sms.
- The equipment will be diagnosed with a problem within 72 hours of receiving the complaint and repaired within 4 weeks, failing which the warranty period will be extended by the number of days the instrument is non-functional post 4 weeks.

### INFORMATION TO TENDERERS

The Tender shall be evaluated under 2 (Two) Bid System:

I Technical Bid

II Financial Bid

TECHNICAL EVALUATION CRITERIA WITH MARKS		
Sl. No.	Essential Features	Max Marks
1	Application	10
2	In vivo optical imaging system	60
4	Warranty, strong service support and other conditions	30
Total		100
<b>A combined evaluation will be carried out and those vendors who score minimum 75% and above will qualify for price Bid opening. Thereafter, financial proposal shall be evaluated. The Commercially LOWEST BIDDER shall be the first preferred vendor for award of order</b>		





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**READ**

**ANNEXURE A – SPECIFICATIONS - *In vivo* Optical Imaging System**

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2. **In vivo optical imaging system:**

- In vivo optical imaging system for highly sensitive imaging system ideal for non-invasive monitoring of small animals such as mice, rat and zebrafish
- System should be capable of optical imaging such as bioluminescence and fluorescence.
- Number of animals to be imaged should be atleast 5 mice
- Should be complete system inclusive of light tight cabinet, CCD camera, excitation LED's and emission filters, sample stage, calibration device, computer workstation and gas anaesthesia system.
- System should be equipped with narrow band LED excitation or halogen excitation wavelength of range 430nm- 745nm and Emission filters covering approx. 490 to 870 nm range, or better.
- Fitted with minimum of 10 excitation wavelengths and minimum of 5 emission filters with a supply of extra 5 emission filters.
- Individual light sources (per wavelength) that fall within the 20nm excitation filter bandwidth.
- Fluorescence excitation source rated for 100,000 hours of illumination or at least 8 years of life span
- The illumination source should have significant performance advantage and the source should be LED arrays or halogen to provide better reliable, stable, excitation light
- Light source with user enabled excitation output control (per wavelength).
- Emission filter wheels should be motorized, and software controlled. Excitation filter Range: 420nm to 755nm & Emission filter Range: 480nm to 880nm.
- Minimum FOV: 5x5 cm to Max FOV 13 x 13 cm, or better
- Quantum efficiency: >85% for 500-700nm range & >35% efficiency 700-900nm for maximum light (event) recognition
- Should be equipped with back thinned, back illuminated grade 1 CCD, thermo-electrically cooled CCD to at least -90°C, absolute.
- Minimum Pixel resolution: 22.5 (µm). Image Pixel: 1024 x 1024, with 16 bit CCD or better
- Solid-state, twin-fan, -90°C absolute CCD camera that is thermoelectrically air cooled.
- CCD dark current of 100 e-/sec/cm<sup>2</sup> or less and low noise
- Minimum Detectable Radiance of better than 60 photons/sec/cm<sup>2</sup>/sr
- Software should have all major functions like acquisition, multiple-image, group analysis, and region of interest analysis.
- Stage temperature should be controllable between 20-40 degree C approx.
- Easy to use image acquisition and analysis software with features of spectral-unmixing and anti-glare functionality, with minimum 4 reporters to be able to spectrally unmix.
- The company should have multiple installations of systems in Worldwide. Provide list of reference installations in Worldwide.
- Data generated should be in absolute calibrated data according to the National Institute of Standards and Technology (NIST). Absolutely Calibrated System.
- Software should be compatible with the Animal Imaging System with following features:
  - o Easy to use image acquisition and analysis software with features of spectral unmixing.
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  - o Unlimited free copies of licensed software for data analysis should be provided.
  - o Should be integrated Instrument and Image Acquisition.
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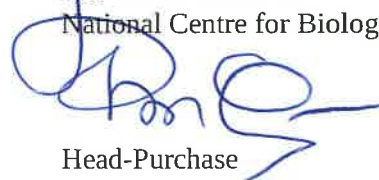
A combined evaluation will be carried out and those vendors who score minimum 75% and above will qualify for price Bid opening. Thereafter, financial proposal shall be evaluated. The Commercially LOWEST BIDDER shall be the first preferred vendor for award of order

All other terms and conditions of the tender document remain unaltered. Please return the Addendum No:1 dt.27/01/2023 and Addendum No:2 dt.01/02/2023 with your signature, date & stamp.

The Addendum-1 is available in our Web site - <http://www.ncbs.res.in/information/tenders.html> and also available in Central Public Procurement Portal, <http://eprocure.gov.in/cppp>.

Thanking you,

Yours faithfully,  
For and on behalf of  
National Centre for Biological Sciences,

  
Head-Purchase

