

TENDER Ref. No: NABI/2(067)/18-19/N-PUR

**Modified Technical Specifications after Pre-Bid Meeting held on 20<sup>th</sup> Dec' 2018**

**Specifications for Animal Imaging System (Invivo Optical Imaging System)**

**Amendments/Changes mentioned in Yellow Colour**

**Technical Specifications for 'INVIVO Optical Imaging system'**

S No	Specifications
1.	Whole body automatic imaging system to image small animals (mice & rats) to facilitate non-invasive monitoring of disease progression, uptake studies, reporter gene assay, fat accumulation, transport studies, hypoxia, vascular studies, cell trafficking, pharmacokinetic studies, FDG kinetics and gene expression patterns in live animals.
2.	Image acquisition and analysis software suitable for fluorescence, bioluminescence and Cerenkov studies compatible for <i>in-vivo</i> and <i>in-vitro</i> studies in both animal as well as plant system ( <i>culture dishes, 96 well plate and slide format</i> ).
3.	Bio-photonics imaging for small animals and plant system such as bioluminescence, fluorescence (400-875 nm of wavelength should be covered), chemiluminescence and radio isotopic Cerenkov studies for <i>in-vivo</i> and <i>in-vitro</i> use.
4.	Complete system consist of light tight cabinet, highly sensitive camera, excitation and emission filters, sample stage, computer workstation, gas anesthesia system, ECG connecting port and optional animal isolation chamber.
5.	Excitation filter wheel must have at least 10 excitation filters/linear filter to cover the complete range of wavelength, as asked and emission filter wheel must have at least 4 emission filters or better. Both Excitation and emission filter wheels must be motorized and software controlled. System must have possibilities for future upgradation in terms of increase in number of excitation and emission filters to increase the range of dyes.
6.	The field of view of imaging should be greater than 12x12 cm (for at least 3 mice/1 rat) or time spent for individual animal should be same
7.	Data generated in absolute calibrated terms according to the National Institute of Standards and Technology (NIST) or equivalent certifications.
8.	Stage movement must be software controlled for different levels of magnifications and system must have provision for maintaining appropriate stage temperature (25 to 40 degrees).
9.	Camera: CCD/any other equivalent technology : Back thinned, back illuminated Grade I cooled, at least 16 bit, thermoelectrically cooled to -90° C (absolute), provides high quantum efficiency over entire visible to near infrared spectrum.
10.	Quantum efficiency or equivalent: >80% for optical range.

11.	Latest computer configuration compatible with system hardware and software. Licensed operating system, 24 inch TFT high resolution monitor, 1TB HDD, 8 GB RAM, CD /DVD/combo reader/writer, or better compatible UPS (minimum 3KVa) with minimum 1 hr backup.
12.	The analysis software should be high-quality, reproducible, quantitative results incorporating instrument calibration & can perform background subtraction with the image algorithms, software should be future upgrade to spectrally unmix multiple reporters (at least 5) within same animal based on Compute Pure Spectra.
13.	<b>Gas Anesthesia:</b> Gas anesthesia ports and 3-5 position manifold within imaging chamber with gas flow controller to maintain anesthesia during imaging sessions. Complete working configuration inclusive of hardware/software, tubing, valves.
14.	Complete in house reagent & cell line support required for <i>in vivo</i> experiments; pre optimized on the instrument.
15.	Provide list of current installations in India and at least 3 performance certificates from existing users.
16.	Warranty: 1 Year. <i>Quote for 5 years AMC/CMC charges after completion of warranty.</i>
17.	Complete installation and application training module as per the requirement of user. Full technical/application support to carry out first few experiments as the part of training schedule.
18.	Dyes or consumables for minimum 100 reactions should be provided at the time of installation of machine.
19.	System must be energy efficient.

**All other Terms and Conditions of the tender remain unchanged**

**Stores and Purchase Officer**