

Specifications for Small animal in vivo imaging system

- 1 Should be an in vivo automated optical imaging system to image small laboratory animals like mice, rats.
- 2 System should allow biophotonic imaging for small animals such as bioluminescence, fluorescence, chemiluminescence, X-ray imaging and radioisotopic Cerenkov studies for in vivo use.
- 3 System should have an in built/integrated light tight cabinet, CCD camera, excitation and emission filters, sample stage, computer workstation, optional gas anesthesia system.
- 4 System should have minimum 19 excitation and 6 emission filters. Both filter wheels should be motorized and software controlled.
- 5 Data generated should be in absolute calibrated data as per international standards.
- 6 Stage movement should be software controlled for different levels of magnifications.
- 7 Stage temperature should be controllable between 20C to 40C.
- 8 Field of view (FOV) should be suitable to image single and multiple small animals simultaneously.
- 9 Should be equipped with thermo electrically cooled CCD.
- 10 Thermoelectrically cooled to at least -90C.
- 11 Quantum efficiency: >85% for 500-700nm range.
- 12 Image acquisition and analysis software suitable for fluorescence, bioluminescence and Cerenkov studies should be licensed for in-vivo and in-vitro studies.
- 13 Software should be able to spectrally unmix multiple reporters (minimum 3-5) within same animal based on the spectra. Software should be able to deconvolute multiple quantitative and qualitative analyses simultaneously and generate transferrable data as excel file.

14 Gas anesthesia ports and 5 position manifold with gas flow controller should be supplied. Complete working configuration inclusive of hardware/software, tubing, valves, should be supplied.

15 System should have an in-built X-Ray module with Energy range 10-40 kV, Scan time of 10 sec min, Radiation Shielded Cabinet.

16 The system should have latest computer configuration compatible with system hardware and software, licensed operating system, minimum 27" high resolution monitor, minimum 1 TB HDD, preferable solid state hard disk, minimum 1 GB graphics card and minimum 32 GB RAM etc.

17 The company should have minimum of 8-10 installations of similar systems in India, and should come with minimum 1 year warranty, services.