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File No.: IITI(MM)/BSBE/097/PRJ/HJ/2025-202 **17/12/2025**
GeM Bid: GEM/2025/B/6934867

PREBID REPORT

The meeting for Pre-bid discussion was held at **IIT-Indore through online via google meet on 10/12/2025 at 03.00 PM onwards** for Custom bid on GeM Portal for **the procurement of 3D X-ray Computed Optical Tomography Small Animal In Vivo Imaging System"**

The report of the meeting is as mentioned below ***(M/s Imperial Life Science (P) Ltd.)***

Sl. No.	Reference of the Clause/ Page No. of the Tender Document	Query raised by prospective bidder	Response from IITI
M/s: Imperial Life Sciences (P) Ltd.			
1.	In vivo animal imaging system for small laboratory animals like mice and rat, with modalities for Bioluminescence, Chemiluminescence, Fluorescence, Cerenkov, and Computed Tomographic imaging in a single integrated system.	In vivo animal imaging system for small laboratory animals like mice and rat, with modalities for Bioluminescence, Chemiluminescence, Fluorescence, Cerenkov, and Computed Tomographic imaging in a single integrated system or as a coupled system.	**Amended** **Can be read as:** In vivo animal imaging system for small laboratory animals like mice and rat, with modalities for Bioluminescence, Chemiluminescence, Fluorescence, Cerenkov, and Computed Tomographic imaging in a single integrated system or standalone system
2	The system should include a light-tight cabinet-integrated CCD camera, excitation and emission filters, sample stage, gas anaesthesia system, and computer workstation.	The system should include a light-tight cabinet-integrated CCD camera, excitation and emission filters or LEDs, sample stage, gas anaesthesia system, and computer workstation.	**Amended** **Can be read as** : The system should include a light tight cabinet-integrated CCD camera excitation and emission filters/LED's, sample stage, gas anesthesia system and computer workstation
3	System should be capable of following features in a single integrated unit:	System should be capable of following features in a single integrated unit or in a coupled format	**No Change / User Requirement:** System should be capable of following features in a single integrated unit
4	a) The system should provide 3D surface topography by scanning laser and be able to create 3D images using optical light for accurate reconstruction of light sources in deep tissues.	Request to kindly remove this point. As it is company specific.	**No Change / User Requirement:** a. The system should provide 3D surface topography by scanning laser and be able to create 3D images using optical light for accurate reconstruction of light sources in deep tissues.
	b) Quantify the depth, geometry, and brightness of fluorescent & bioluminescent sources in 3D space using tomography.	b) Quantify the depth, geometry, and brightness of fluorescent or bioluminescent sources in 3D space using tomography.	**No Change / User Requirement:** b. Quantify the depth, geometry, and brightness of fluorescent & bioluminescent sources in 3D space using tomography
	c) The reconstruction of optical signals with CT structure in a single integrated platform without any external device or cassette.	c) The reconstruction of optical signals with CT structure in a single integrated platform or in couple manner with or without any external device or cassette.	**No Change / User Requirement:** c. The reconstruction of optical signals with CT structure in a single integrated platform without any external device or cassette.

	d) The system should have X-Ray detector of CMOS panel with 3000 x 800 pixels with minimum resolution voxel values from 45 µm to 300 µm or better.	d) The system should have X-Ray detector of CMOS panel with minimum resolution with 3000 x 800 pixels voxel values from 45 µm to 300 µm or better.	**Amended** **Can be read as:** The system should have X-Ray detector of CMOS panel with 3OOO x 8OO pixels with minimum resolution voxel values from 45 pm to 3OO pm or The System should have X-ray detector of FDP panel or better.
7	The system should be sensitive enough to detect single cell in vitro & in vivo with proven data.	Request to kindly remove this specification as it company specific OR modify with MDR values which determines sensitivity of the system. The system should have the highest sensitivity defined by MDR (Minimum Detectable Radiance) value of less than or equal to 70 photons/sec/cm2/sr.	**No Change / User Requirement:** The system should be sensitive enough to detect single cell in vitro & in vivo with proven data.
8	The system should have trans-illumination stage for multiple excitations (minimum 8 different wavelengths) with precise X-Y point location for localization and quantification of deep tissue sources in 3D tomography reconstruction for fluorescence.	Request to kindly remove this point. As it is company specific. The system should have trans-illumination stage or should use Optical Projection Imaging Map and BCAM based reconstruction for quantification of deep tissue sources in 3D Tomography.	**No Change / User Requirement:** The system should have trans-illumination stage for multiple excitations (minimum 8 different wavelen8ths) wi' precise X-Y point location for localizatio and quantification of deep tissue sources in 3D tomography reconstruction for fluorescence
9	Camera should be Grade-1 CCD, at least 4.0 MP, absolute thermoelectrically cooled to -90°c, back- thinned, back-illuminated with minimum 10 excitation and 18 emission filters (Filter range: 420 nm to 870 nm).	Camera should be Grade-1 CCD, at least 4.0 MP, absolute thermoelectrically cooled to -90°c, back- thinned, back-illuminated with minimum 10 excitation filters/LEDs and 18 emission filters (Filter range: 360 nm to 870 nm).	**Amended** **Can be read as:** Camera should be Grade-1CCD, at least 4.0 MP, absolute thermoelectrically cooled to 90°C, back-thinned, back illuminated with minimum 10 excitation filters/LEDs & 18 emission filters (Filter range: 450nm to 870 nm) or better.
10	Should be able to co-register organs from in-built Mouse Atlas on a 3D image for exact positioning of point source.	Should be able to co-register organs from in-built Mouse Atlas on a 3D image or Optical Projection Map for exact positioning of point source.	**No Change / User Requirement:** Should be able to co-register organs from in-built Mouse Atlas on a 3D image for exact positioning to point source.
14	The analysis software should perform background subtraction using image algorithms and should be able to perform spectral unmixing of multiple reporters (up to 4) within same animal using the Compute Pure Spectra algorithm with spectral library generation.	The analysis software should perform background subtraction using image algorithms and should be able to perform spectral unmixing of multiple reporters (upto 4) within same animal using the Compute Pure Spectra algorithm with spectral library generation.	**Amended** **Can be read as:** The analysis software should perform background subtraction using image algorithms and should be able to perform spectral unmixing of multiple reporters (up to 4) within same animal using the Compute pure Spectra algorithm or calculation based unmixing with pure spectra based. With spectral library generation. unmixing proven data should be provided.
17	The company should have complete in-house reagent & cell line support manufactured by the same company required for in vivo experiments and pre-optimized on the instrument.	Request to remove or modify this point. Our system is an open system and can accommodate any reagents/accessories.	**Amended** **Can be read as:** The company should have complete reagent & cell line support with pre-optimized on the instrument.
19	Software: Automated co-registration along with tertiary registration. Advanced visualization and 30 analysis tools for longitudinal µCT applications,	Software: Automated co-registration along with tertiary registration. Advanced visualization and 30 analysis tools for longitudinal µCT applications,	**No change / User Requirement:** Software: Automated co registration along with tertiary registration. Advanced visualization and 3D analysis tools for

	data processing and PC data transfer enabled for PC.	data processing and PC data transfer enabled for PC.	longitudinal µCT applications, data processing and PC data transfer enabled for PC.
20	At least 5 similar systems must have been supplied in India.	At least similar systems mu 3 st have been supplied in India or 100+ installations globally.	**No Change / User Requirement:** At least 5 similar systems must have been supplied in India.

The report of the meeting is as mentioned below. ***(M/s Fusion Scientific Technologies Pvt. Ltd.)***

Sl. No.	Reference of the Clause/ Page No. of the Tender Document	Query raised by prospective bidder	Response from IITI
M/s: Fusion Scientific Technologies Pvt. Ltd.			
1.	In vivo animal imaging system for small laboratory animals like mice and rat, with modalities for Bioluminescence, Chemiluminescence, Fluorescence, Cerenkov, and Computed Tomographic imaging in a single integrated system.	In vivo animal imaging system for small laboratory animals like mice and rat, with modalities for Bioluminescence, Chemiluminescence, Fluorescence, Cerenkov, and Computed Tomographic imaging in a single integrated or standalone system.	**Amended** **Can be read as:** In vivo animal imaging system for small laboratory animals like mice and rat, with modalities for Bioluminescence, Chemiluminescence, Fluorescence, Cerenkov, and Computed Tomographic imaging in a single integrated system or standalone system
2	The system should include a light-tight cabinet-integrated CCD camera, excitation and emission filters, sample stage, gas anaesthesia system, and computer workstation.	The system should include a light-tight cabinet-integrated CCD camera / qCMOS camera, excitation and emission filters, sample stage, gas anaesthesia system, and computer workstation.	**Amended** **Can be read as** : The system should include a light tight cabinet-integrated CCD camera excitation and emission filters/LED's, sample stage, gas anesthesia system and computer workstation
3	System should be capable of following features in a single integrated unit:	System should be capable of following features in a single integrated unit or in a coupled format	**No Change / User Requirement:** System should be capable of following features in a single integrated unit
4	a) The system should provide 3D surface topography by scanning laser and be able to create 3D images using optical light for accurate reconstruction of light sources in deep tissues.	The system should provide 3D surface topography by scanning laser or computation reconstruction and be able to create 3D images using optical light for accurate reconstruction of light sources in deep tissues.	**No Change / User Requirement:** a. The system should provide 3D surface topography by scanning laser and be able to create 3D images using optical light for accurate reconstruction of light sources in deep tissues.
	b) Quantify the depth, geometry, and brightness of fluorescent & bioluminescent sources in 3D space using tomography.	b) Quantify the depth, geometry, and brightness of fluorescent & bioluminescent sources in 3D space using tomography or Quantify the depth, geometry, and brightness of fluorescent & bioluminescent sources in 3D space using Computational reconstruction The system shall enable quantitative estimation of depth, spatial geometry, and brightness of fluorescent and bioluminescent sources in 3D space based on multi-angle optical data collected and computational reconstruction	**No Change / User Requirement:** b. Quantify the depth, geometry, and brightness of fluorescent & bioluminescent sources in 3D space using tomography
	c) The reconstruction of optical signals with CT structure in a single integrated	c) The reconstruction of optical signals with or without CT structure in a single	**No Change / User Requirements:** c. The reconstruction of optical signals with CT structure in a single integrated

	platform without any external device or cassette.	integrated platform without any external device or cassette.	platform without any external device or cassette.
	d) The system should have X-Ray detector of CMOS panel with 3000 x 800 pixels with minimum resolution voxel values from 45 µm to 300 µm or better.	d) The system should have X-Ray detector of CMOS panel with 3000 x 800 pixels with minimum resolution voxel values from 45 um to 300 um or better or The System should have X-ray detector of FDP panel with Csl (Cesium Iodide) Scintillator with minimum resolution voxel values from 45 um to 300 um or better.	**Amended** **Can be read as:** The system should have X-Ray detector of CMOS panel with 3OOO x 8OO pixels with minimum resolution voxel values from 45 pm to 3OO pm or The System should have X-ray detector of FDP panel or better.
5	Optical field of view should be at least 3.5 x 3.5 cm to 20 x 20 cm or better with stage movement controlled by software for all magnifications. image should be acquired by direct CCD camera.	Optical field of view should be at least 3.5 x 3.5 cm to 20 x 20 cm or better with stage movement controlled by software for all magnifications. Image should be acquired by direct CCD camera or Optical field of view should be at least 3.5 x 3.5 cm to 20 x 13 cm or better with stage movement controlled by software for all magnifications. Image should be acquired by direct CCD camera or equivalent Qcmos camera.	**No Change / User Requirement:** Optical field of view should be at least 3.5 x 3.5 cm to 20 x 20 cm or better with stage movement controlled by software for all magnifications. image should be acquired by direct CCD camera.
7	The system should be sensitive enough to detect single cell in vitro & in vivo with proven data.	Request to kindly remove this specification as it company specific OR modify with MDR values which determines sensitivity of the system. The system should have the highest sensitivity defined by MDR (Minimum Detectable Radiance) value of less than or equal to 70 photons/sec/cm2/sr.	**No Change / User Requirement:** The system should be sensitive enough to detect single cell in vitro & in vivo with proven data.
8	The system should have trans-illumination stage for multiple excitations (minimum 8 different wavelengths) with precise X-Y point location for localization and quantification of deep tissue sources in 3D tomography reconstruction for fluorescence.	The system should have trans-illumination stage for multiple excitations (minimum 8 different wavelengths) with precise X-Y point location for localization and quantification of deep tissue sources in 3D tomography reconstruction for fluorescence or The system should have trans-illumination stage for multiple excitations (minimum 8 different wavelengths) with precise X-Y point location for localization and quantification of deep tissue sources in 3D computational reconstruction for fluorescence.	**No Change / User Requirement:** The system should have trans-illumination stage for multiple excitations (minimum 8 different wavelen8ths) with precise X-Y point location for localization and quantification of deep tissue sources in 3D tomography reconstruction fc fluorescence
9	Camera should be Grade-1 CCD, at least 4.0 MP, absolute thermoelectrically cooled to -90°c, back- thinned, back-illuminated with minimum 10 excitation and 18 emission filters (Filter range: 420 nm to 870 nm).	Camera should be Grade-1 CCD, at least 4.0 MP, absolute thermoelectrically cooled to -90 o C, back-thinned, back illuminated with minimum 10 excitation and 18 emission filters (Filter range: 420 nm to 870 nm) or Superior Qcmos camera thermoelectrically cooled, preferably back illuminated for better photon collection, extremely low readout noise, large resolution, High Quantum efficiency 85% for 475 nm range, cooling upto - 20 degC to ensure ultra-	**Amended** **Can be read as:** Camera should be Grade-1CCD, at least 4.0 MP, absolute thermoelectrically cooled to 90°C, back-thinned, back illuminated with minimum 10 excitation filters/LEDs & 18 emission filters (Filter range: 450nm to 870 nm) or better.

		low dark current and high-sensitivity performance.	
10	Should be able to co-register organs from in-built Mouse Atlas on a 3D image for exact positioning of point source.	Should be able to co-register organs from in-built Mouse Atlas on a 3D image for exact positioning of point source	**No Change / User Requirement:** Should be able to co-register organs from in-built Mouse Atlas on a 3D image for exact positioning to point source.
14	The analysis software should perform background subtraction using image algorithms and should be able to perform spectral unmixing of multiple reporters (up to 4) within same animal using the Compute Pure Spectra algorithm with spectral library generation.	The analysis software should perform background subtraction using image algorithms and should be able to perform spectral unmixing of multiple reporters (up to 4) within same animal using the Compute pure Spectra algorithm with spectral library generation or The analysis software shall perform algorithm-based background subtraction and enable spectral unmixing of multiple reporters (up to four) within the same animal, based on pure-spectral component estimation with user-generated spectral library support	**Amended** **Can be read as:** The analysis software should perform background subtraction using image algorithms and should be able to perform spectral unmixing of multiple reporters (up to 4) within same animal using the Compute pure Spectra algorithm or calculation based unmixing with pure spectra based. With spectral library generation. unmixing proven data should be provided.
17	The company should have complete in-house reagent & cell line support manufactured by the same company required for in vivo experiments and pre-optimized on the instrument.	The company should have complete in-house reagent & cell line support manufactured by the same company required for in vivo experiments and pre-optimized on the instrument.	**Amended** **Can be read as:** The company should have complete reagent & cell line support with pre-optimized on the instrument.

All prospective/willing bidders are requested to take note of this report as part of the Tender document. All other terms and conditions of the tender remain unchanged.

17/12/25

Assistant Registrar (MMS)

सहायक कुलसचिव
(अनुसंधान एवं विकास सामग्री प्रबंधन विभाग)
Assistant Registrar
(R&D-Materials Management Section)