UNIVERSITY OF HYDERABAD

(A Central University established by an Act of Parliament, 1974)

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Notice Inviting Tender No. ***UH/SLS/Dean/High-Content, High-Throughput Microscope/2023***

Dated: **31/03/2023**

EXTENSION-I

Sealed tenders are invited for supply of the following items under **a two bid system** from the reputed manufacturers or their authorized dealers to the University of Hyderabad, Hyderabad, an Institution of Eminence, as designated by Government of India.

Sealed bids should reach the office of the **Dean, School of Life Sciences, University of Hyderabad, Hyderabad on before Date:23/05/2023 Time:05:00pm**

The details of items, expected quantity and their technical specifications are given below:

A 'High Content', Two-photon and Single-photon confocal 'Inverted Fluorescent Microscope with Live Cell Capability' with Lifetime imaging/FLIM with the latest generation Imaging technology for Live cell and whole animal imaging in Visible and NIR zone (High Content-part A) along with High Throughput Single Cell Analysis System with dedicated Live Cell Incubation for high resolution imaging applications (High-throughput-part B).

	Part A: High content imaging platform **A Two photon and Single photon confocal 'Inverted Fluorescent Microscope with Live Cell Capability' with Lifetime imaging/FLIM in Visible and NIR zone**
	Bids are invited for a state of art imaging platform consisting of two parts (part A: High content live cell imaging system and part B: high throughput screening system) for high resolution, integrated high content, high throughput imaging platform for a wide-ranging application for life sciences and interdisciplinary sciences. OEM/authorized representatives can bid for any one/single part of the imaging platform. Preference will be given to OEM/their authorized representatives that can offer solutions for BOTH parts of the imaging platform.
	Part A: High content imaging platform **A Two photon and Single photon confocal 'Inverted Fluorescent Microscope with Live Cell Capability' with Lifetime imaging/FLIM in Visible and NIR zone** **This will be an <u>inverted Fluorescent Microscope with Live Cell Capability</u>** and high content screening system, facilitated with highly sensitive detection for in vivo Imaging, intravital fluorescence Imaging in ***Spectral as well as in lifetime modes through multiple laser lines across the visible spectrum*** selectable using an appropriate optical system.

System will be an **Inverted Trinocular Epifluorescence Microscope with Imaging System** plus visible wavelength range FLIM as well as NDD based IR FLIM attachment with a capacity for fast FLIM with spatial resolution. Built in Motorized Z-focus drive with minimum z-step resolution of 5nm or better Individual Band Pass Fluorescent filters for DAPI, FITC/GFP, CFP, YFP, TRITC/Rhodamine/Cy3 for visualization. The spectral dispersion of the emission light should be of the latest technology with reflection grating or prism dispersion. Maximum scan resolution should be 8K x 8K for all channels and should be freely selectable down to 16x16 pixels and this system should be enabled for **intravital whole animal two photon imaging. The system should be enabled for full spectral live cell and live animal imaging with fast FLIM. FLIM is essential to study molecular interactions and multiple biological processes in live cells and live animals with high spatial and temporal resolution,** in spectral as well as in lifetime modes. System should be offered with FPGA based TCSPC lifetime functionality in Single Photon and Two-Photon (2-Photon) excitation modes. This is a state-of-the-art Lifetime based Imaging workstation for Single Photon and Two-Photon applications in visible and NIR zone having the capability of performing lifetime-based species separation in visible and NIR zone using Single Photon and 2-Photon modes respectively. The system should consist of the following: Detailed technical specifications are as follows.

1	**Fully Motorized & Computer Controlled Inverted Research Microscope:** a) Chromatically corrected optics for Bright field, DIC, Fluorescence observations with accessories for Single Photon and 2-Photon imaging. b) Built in/integrated Motorized Z-focus drive with minimum z-step resolution of 5nm or better for intracellular molecular mechanism studies such as ion mobilization etc. c) Six position or better motorized FL filter wheel, 6 or more position objective turret. d) XY motorized high precision, Linear Encoded Scanning Stage with universal sample holder for slides, 35/60 mm Petri dish, Labtech chambers and multi-well plates for tile, mosaic and multi position imaging. e) LED transmitted light illumination for BF/DIC and high-power LED illumination for fluorescence with PC control. f) High resolution research grade Apochromatic objectives should be offered with following specifications (magnification/NA): Plan Apo 10X/0.40 or better, Plan Apo 20X/0.75 or better, Plan IRApo 20X/0.95 or better water immersion, Plan IRApo 40X/1.10 or better water immersion, Plan apo 40X/1.3 or better oil immersion and Plan Apo 63X/60X 1.40 or better oil immersion objective. DIC accessories for all objectives to be included. Quoted objectives should be corrected for UV-VIS-IR. 1-2 of the objectives should have high working distance for 3-D samples. g) Individual Band Pass Fluorescent filters for DAPI, FITC/GFP, CFP, YFP, TRITC/Rhodamine/Cy3 for visualization. h) integrated hardware based z autofocus/drift compensation using IR laser/LED for stable/long-term imaging

2	**Spectral Scan Head with Detection system:** a) Laser point scanning and high sensitive detection unit for single photon applications. At least 3 high sensitive detectors should be provided with at least 45% QE or better. All detectors should have freely selectable emission band width for optimal detection of fluorochromes. b) Should be capable of detection and separation of minimum 2-3 channels simultaneously using high sensitive detectors with QE 45% or better and capable of single photon counting applications. All the channels should be filter free spectral type with free selectable emission range without any limitations. c) The spectral dispersion of the emission light should be of the latest technology with reflection grating or with Prism dispersion. d) Laser scan optics covers the entire wavelength range from 400 nm to 1300 nm and should have simultaneous laser coupling ports for UV, VIS and IR lasers. The system detection capability should be from 410nm to 850nm at least or better to cover UV, Vis and NIR zone detection. e) Software controlled variable and adjustable pinhole mechanisms should be available. f) High speed XY galvo scanner with total scan flexibilities for Line, free hand curved line, XY, XYZ, XYZt and XYZλt etc. g) Maximum scan resolution should be 8K x 8K for all channels and can be selected freely down to 16x16 pixels. h) Scanner should be capable of acquiring up to minimum 10 fps @ 512x512 pixel resolution without line skipping, interpolation and increase to at least 200 fps or better @ 512 x 16 or better. The above-mentioned speed should be available in both Single Photon and 2 Photon modes. i) The scan field diagonal should be 20 mm or better. Data acquisition and Digitization capability with 8/12/16 bit should be available. j) An additional Transmitted light detector for bright field and DIC imaging should be quoted.
3	**TCSPC/FPGA based absolute photon counting applications using spectral detectors:** a) The system must be equipped with TCSPC/FPGA based lifetime acquisition capability for absolute Photon counting applications in both Single Photon and 2 Photon modes. b) The spectral window must be flexible to close and open as narrow as 5nm window to as broad as 400nm. c) The system should come with a complete lifetime analysis module with multi-exponential and other curve fitting routines. d) At least 448, 472, 488, 514, 532, 561, 594, 647 and 680 nm pulsed laser lines should be provided for single-photon lifetime applications in visible mode. e) A pulse picking mechanism to be available for all lasers to tune repetition rate of lasers for FLIM and other applications. Effective laser repetition rate of 80, 40, 20, 10 MHz to be achieved. f) The system should be offered with an Ultra-fast time-correlated single photon counting (TCSPC/FPGA) system based on 2 channel Hybrid GaAsP or equivalent detectors in Multi-Photon mode. The detectors should combine superior time resolution and SPAD-like sensitivity with the large active area of a detector. Should have no 'diffusion tail' in the temporal response and should be free of after pulsing. g) The Lifetime module must have a dedicated and integrated 64-bit acquisition module, lifetime (FLIM) Data Analysis including Decay tail fitting analysis, pixel wise Lifetime information displayed as color coding, Lifetime distribution, average lifetime analysis, FLIM-FRET analysis including multi exponential donor decay. The system should come with a suitable computer workstation (Desktop) with Windows Operating system.

4	**NIR Applications:**
	a) The system must be equipped with NIR applications for novel dyes such as ATTO 680, Alexa 730 and Cy7 etc.
	b) At least one single-photon NIR laser 730/790 nm should be provided along with detection capability up to 850nm or better.
5	**Average Lifetime based Applications:**
	a) The system must be supported for Average Lifetime based applications also other than Absolute photon counting mode. This additional imaging dimension in both Single Photon and 2 Photon mode should support various studies such as lifetime-based species separation, lifetime-based separation of molecules based on different physiological conditions such as variations in pH, redox or metabolic conditions etc., to identify relevant components present in any given sample which are otherwise not possible to separate based on conventional spectral separation methods. Preferentially average lifetime-based analysis should be done at high speed for easy visualization and tuning.
6	**Laser modules with integrated optically tunable device for laser selection and modulation:**
	a) System must be equipped with various laser lines for Single Photon confocal based live cell and other imaging applications which include 448, 472, 488, 514, 532, 561, 594, 647 and 680 nm laser lines.
	b) There must be a 405 laser available through dedicated UV port and Optics with DMOD control. Necessary Precision of DMOD control needs to be specified for photo-illumination and photoactivation applications
	c) There must be a dedicated 730/790nm laser line provided for NIR imaging applications.
	d) All the lasers must be selected and controlled through an optically tunable device for the highest degree for precise single laser line selection and excitation suppression.
	e) All lasers must be diode or Solid state in nature.
7	**Two photon application accessories:**
	a) System must be equipped with a Two Photon Detection system with Non-descanned detection (NDD) mechanism having atleast TWO highly sensitive detectors with QE> 45%.
	b) System must have a dedicated 2P laser insert port for one or more IR lasers and also to combine with Lifetime imaging applications in MPE mode.
	c) The system must be equipped with all the direct coupling optics for the laser to the scan head including dual AOM and Periscopes. Automated Periscopes & Collimation Optics should be part of the system and controlled through software for shift free optimal multichannel fluorescence imaging and applications.
	d) Scan Head should have optics corrected up to 1300nm. The periscope should steer the beam in parallel to the scan head where the beam combiner combines the beams to project both beams on the optical axis onto the sample.
8	. **Online Resolution enhancement Module:**
	a) The system should have Realtime Online Super Resolution Imaging modality.
	b) Should be able to achieve Lateral resolution of 120 to 140nm in XY and axial resolution of 250 to 350nm in Z without any post processing or manual intervention.

	c) Detection should be based on high sensitive HyD/GaAsP detectors for super resolution (SR) imaging. Simultaneous mode imaging with at least 2 fluorophores should be possible with the SR system in both single photon and 2 Photon modes.
9	**Control computer and Monitor:** High-end workstation HP Z6G4 or Equivalent with Intel Xeon Gold 6244 processor (8 cores / 16 threads). 96 GB working memory. Nvidia Quadro RTX 5000 graphics card with 16 GB graphic card memory and 3072 CUDA cores. Fast 256 GB SATA SSD system drive, very fast 2 TB M.2 SSD hard drive for temporary storage of data. Normal 6 TB HDD drive for storage of data. Intel X710 network adapter. HP 9.5mm Slim SuperMulti DVD writer. Windows 10 IoT Enterprise LTSC 2019. Keyboard, mouse und mouse pad. 2 Thunderbolt ports (TB3). HP Z32 or equivalent 4K-UHD-Display, 31 inch or better (2 no's).
10	**System control and Imaging Software:** a) Software capable of controlling Motorized components of microscope, digital camera, confocal scan head, laser control including AOTF and Image acquisition & processing for confocal and super resolution imaging. b) Saving all system parameters with the image for repeatable/reproducible imaging. c) Line, curved line, frame, Z-stack, Time series imaging capabilities. d) Multipoint time lapse imaging (Navigation) should be made available in both confocal and MP mode. e) Real ROI bleach for FRAP, Photo-activation/conversion experiments. f) FRET imaging as well as Quantitative data analysis capability. g) Standard geometry Measurements like length, areas, angles etc. including intensity measurements. h) Advanced 3D image reconstruction with rendering from a Z-stack image series. i) Co-localization and histogram analysis with individual parameters. j) Software must have 2D and 3D deconvolution capabilities, image processing and quantification analysis capabilities. k) Spectral unmixing with fingerprinting /spectral unmixing for separation of overlapping excitation/emission spectra of fluorophores.
11	**For the system:** a) A suitable active anti-vibration table along with an air pump for the High content confocal live cell stable imaging needs to be provided. b) A suitable 5KVA online UPS with 30 mins backup needs to be provided. c) A trained operator needs to be provided by the OEM/Representative for a period of 3 years for the operation and maintenance of the system. The Operator should be trained in operation and maintenance of the system, as well as image analysis. Operator to be selected on mutual agreement between OEM/Representative and School of Life Sciences.

PART – B High throughput Single Cell Analysis and live cell screening high resolution imaging system

This will be a High throughput single cell analysis system and High-Throughput Screening system with capacity to acquire, screen and analyze imaging data in live cell multiwell plate format. System will have high end image analysis of large imaging data sets. This system will be an 'inverted Fluorescent Microscope with Live Cell Capability' with multiple objectives including ~1.5X, 10X, 20X and 60X magnification. 258 Data sets can be generated and analyzed from multiwell plates for studying cell shape morphology, intracellular imaging, and molecular interaction and drug screening applications. System will be capable of high-resolution imaging with high throughput screening.

Fully integrated and enclosed type-high throughput live Cell Imaging system should be capable of high sensitive detection with multi-colour imaging for Live Cell applications. System should be capable of multimodal imaging capabilities such as multichannel fluorescence imaging, Z-stack, co-localization, time-lapse imaging, Advanced 3D imaging etc.

Item	Technical Specifications
1	**Optics and Motorization** **1.** The system should be fully motorized with all the hardware enclosed in a closed chamber. **2.** Motorized focus drive and Motorized XY stage for 3D imaging and multi-well plate applications. **3**. Hardware based focus drift compensator with dedicated IR LED (800 nm or above) for continuous focus stability during long term live cell imaging. **4**. Objectives: Scanning objectives: 1.6x/0.05 and 10x/0.32 Other Objectives: 20X (NA 0.75 or higher), 60X/63X water (N.A 1.2 or higher) with Motorized correction collar, Optional item: 60X/63X Oil (NA 1.4 or higher) **5**. Automatic Water dispenser for long term live cell imaging for water immersion objective applications. **6**. IMC/Phase contrast for all the objectives.
2	**Imaging modes** **1.** Widefield imaging mode. **2.** High Resolution widefield imaging mode. **3.** Transmitted light-based IMC/Phase contrast imaging mode.
	4. Colour Imaging mode for H&E staining or similar applications. 5. System should be upgradable to a confocal based imaging system.
3	**Imaging Capabilities** **1.** System should be capable of simultaneous 4 color imaging for fluorescence applications in Widefield and High resolution Widefield imaging modes **2.** Standard multi-channel, Z stack and Time-lapse, multi-point and stitching applications should be available. 3. System to be upgradable to a confocal imaging capability on site, with high resolution imaging.

4	**Detection Systems** **1.** 4 dedicated high sensitive monochrome CMOS Cameras for Fluorescence applications. **2.** At least 1 camera for morphology imaging in IMC/Phase contrast modes.
5	**Excitation system** **1.** At least 4 individual LED lines; 365, 470, 555 and 625 nm for widefield and High Resolution Widefield imaging applications covering the entire visible spectrum.
6	**Computer workstation and monitor** **1.** Workstation: HP Z4G4 or equivalent, operating System: Win10 IoT Enterprise; Processor: Intel XEONW-2123 3.6 4C CPU **2.** Main Memory: 128GB (4X32GB) DDR4 2666 ECC REG RAM **3.** Graphics Board: NVIDIA Quadro RTX 5000 16GB (4)DP+USB or equivalent **4.** System Drive: 480GB SATA Enterprise SSD **5.** Temp Drive and Data Drive: Option of 2x4TB or 2x1.9TB M.2 SSD **6.** DVD writer: 9.5 DVDWR 1ST ODD **7.** Keyboard and Mouse **8.** Monitor: HP Z32 or equivalent 4K-UHD-Display, 31 inch
7	**Live Cell Incubation System** **1.** The system must be equipped with highly stable, Live Cell incubation Set up with CO2, Temperature, Humidity for long-term live cell imaging applications. System should be such that long term imaging should be achievable without optical disturbances, while maintaining focus. **2.** there should be provision to introduce peristaltic pump and tubing for media exchange in case of longer time lapse experiments.
8	**Software** **1.** The imaging software should control all the motorized functions of the confocal microscope. It should have the capability of multi-dimensional acquisition such as multichannel, time lapse, Z stack, 3D imaging, multi well plates experiment etc. **2.** Advanced software for 3D reconstruction and processing of 3D data having features like Transparent, Maximum Intensity and Depth Coding, shadow projection, clipping, Orthogonal Sectioning and Annotation tools. 3. Colocalization analysis along standard geometrical analysis such as area, length etc. 4. AI based Pixel Classifier for high throughput image analysis with higher degree of accuracy.
9	**Accessories** **1.** A Suitable high end antivibration table should be provided along with the system. Antivibration table compliance shall be such that stable uninterrupted long-term live cell imaging can be achieved. **2.** Computer table and suitable UPS should be provided along with the system.

A dedicated Offline System with following Specifications must be provided along with the system

Computer Workstation with Monitor: Workstation HP Z2G4 or equivalent with CUDA support with Intel Core i5-8500 or equivalent processor (6 cores / 6 threads). 64 GB working memory. Nvidia Quadro RTX 4000

graphics card with 8 GB graphic card memory and 2304 CUDA cores. Fast 256 GB SATA SSD system drive, very fast 512 GB M.2 SSD hard drive for temporary storage of data. Normal 4 TB HDD drive for storage of data. Intel I350-T2 network adapter. HP 9.5mm Slim SuperMulti DVD writer. Windows 10 IoT Enterprise LTSC 2019. Keyboard, mouse and mouse pad. Monitor: HP Z32 or equivalent 4K-UHD-Display, 31 inch or better.

Offline Analysis Software:

State-of-the-art image visualization and analysis software with ability to train and apply machine learning-powered Pixel Classifier for image enhancement and segmentation for radically simplified image segmentation of 2D to 5D microscopy data sets. Wide range of image analysis recipes including nuclei count and tracking, cell count and tracking, particle count and tracking, cell proliferation assay, neurite outgrowth, wound healing, stem cell colony detection, cell tracking, object detection (meshes), object detection (spots), object tracking and lineage tracing etc should be available. Automatic determination of the required parameters using pre-trained deep learning for 3D object analysis along with Batch processing of recipes, trained deep learning models, and trained pixel classifiers should be available as standard. Analysis and editing tools such as the Contour Editor, which simplifies the task of reconstructing complex 3D shapes such as organelles, neurons and other cells, Object Classifier, a machine learning powered tool for classifying objects and identifying new phenotypes, and the Track and Lineage Editor. 3D objects generated using the Contour Editor can be used to delineate regions of interest where users can apply any of the recipes, trained Pixel Classifier, or deep learning models. Pixel and object colocalization analysis.

The Offline analysis software must support multiple different file types (up to ~ 40 file types as per state of the art, industry standards), including lifetime-based data set applications. It should have interactive visualization tools including the Ortho Slicer and the Clipping Planes to selectively reveal regions, objects, and relationships of interest in raw and analyzed mesh data. Image and object text tagging system ideal for collaborative work and to visually keep track of different objects/regions of interest. The Video Animator to unleash creativity to generate high fidelity video animations of up to 4K and 60 fps at least.

Terms & conditions

S. No.	Clause	Description
1	Reference Number	The Reference No. *__UH/SLS/Dean/High-Content, High-Throughput Microscope/2023__* of the **Global Tender Enquiry** dated **31/03/2023** should be clearly mentioned on all envelopes and any correspondence including e-mails with the University.
2	Mode of submission	Hand-written (manuscript) bids and bids submitted through e-mail shall not be accepted. All pages of the tender document must be signed by the authorized representatives of the bidder, in token of having accepted the terms and conditions incorporated in the tender notice.
3	Two Bid System *(This clause is applicable only when NIT is*	As the purchase is a high value plant, machinery, etc., of a complex and technical nature, bids are required to be submitted in two parts as under: *(i) Technical bid consisting of all technical details along with commercial terms and conditions; and*

	invited involving two bid system)	**(ii) Financial bid indicating item-wise price for the items mentioned in the technical bid.** The technical bid and the financial bid should be sealed by the bidder in separate covers duly super-scribed and both these sealed covers are to be put in a bigger cover which should also be sealed and super-scribed. The technical bids are to be opened by the Purchasing Department / Centre at the first instance and evaluated by a duly constituted Purchase Committee. After such evaluation of technical bids, financial bids of only those firms/suppliers which are found technically suitable will be opened, for determining the lowest bid.
4	Certificate from original manufacturers	If the bid is not from the original equipment manufacturer, the suppliers/ dealers should submit an 'authorized agency certificate' from the manufacturer. Tenders received without Authorization Certificate from the original manufacturer will summarily be rejected. Imported purchases should normally be made directly from the foreign principal manufacturers. In the event of purchase made through an Indian agent of the foreign company, an authorization letter issued by the foreign company / manufacturer should be submitted along with the technical bid. No commission shall be payable to Indian Agent.
5	Make and Model	The Vendor/Supplier is required to clearly mention the make, model, size and other specifications along with the unit price. Items with better specifications may also be offered / quoted and the decision of the University in this regard is final. Appropriate brochures / pamphlets / literature (original and not photo copies) for each item providing full technical details must be attached to enable their verification.
6	Bidder Details	The bidder's complete correspondence address, phone numbers and e-mail ids, and website details (if any), must be clearly mentioned in the technical bid documents. (Pamphlet / Brochure depicting the profile and organization structure may be enclosed.) The details of PAN, GSTIN, EPF, ESIC, Registered License Certificate, Labour License etc., may be mentioned and supporting documents shall be enclosed along with the technical bid.
7	Validity of bids	Prices quoted in the bid (financial bid) shall be valid for a minimum period of **90 days** from the date of opening of the financial bids. No upward revision of the prices will be permitted during the said validity period.
8	Basic Price	The bidder should clearly indicate price per unit on FOR, UoH, Hyderabad basis. In respect of imported items, the prices should be quoted on the basis of **CIP / CIF Hyderabad.** *If the bidder quotes nil charges / consideration in respect of service contracts, the bid shall be treated as unresponsive and will not be considered.*
9	Taxes: GST& Customs Duty	The bidder should clearly indicate all applicable taxes separately for each item along with **HSN Code** and then arrive at a total price of all the items indicated in the Notice Inviting Tender. GST is applicable for all indigenous items. Customs Duty is applicable for all imported items. However, the University is entitled for exemption / concessional rate (at 5.5% of the total value) of Customs Duty on all imported items mentioned vide GoI Notification No. 51/96- Customs dated: 23.07.1996, No. 28/2003 - Customs dated:

		01.03.2003, No.43/2017 - Customs dated: 30.06.2017 and DSIR Certificate No. TU/V/RG-CDE (58)/2016 dated: 20.02.2018, as amended from time to time.
10	Other costs / charges	The bidder should clearly indicate all applicable other charges, if any, separately viz., transportation, packing, loading, unloading, insurance, installation, commissioning, testing, training, etc.,
11	Earnest Money Deposit (EMD) / Bid Security	The bidders should furnish bid security for **3% of the value** along with their technical bid in the form of Account Payee Demand Draft / Banker's Cheque from any of the Commercial Banks in an acceptable form, drawn in favor of the Finance Officer, University of Hyderabad, payable at Hyderabad. If the bidder furnishes a Fixed Deposit Receipt / Bank Guarantee, the instrument shall be issued in favor of Finance Officer, University of Hyderabad, payable at Hyderabad and shall be valid for a period of 45 days from the date of opening technical bids. The MSE units registered with MSME and certificates obtained from NSIC under the Single Point Registration Scheme (SPRS) shall be exempted from payment of Earnest Money Deposit (EMD) on production of requisite proof in respect of valid certification from NSIC.
12	Warranty	The bidders should offer a minimum period of **5 years warranty** for all the quoted items from the date of successful installation of the equipment/ item. The quoted price shall be inclusive of warranty costs. Warranty should cover all components of the microscope including light sources. AMC/FMC charges for subsequent years shall be quoted separately, if applicable.
13	Comprehensive Annual Maintenance Contract (CAMC)	Bidders shall quote Comprehensive Annual Maintenance (CAMC) charges for a period of 2 years after expiry of the initial warranty period of 5 years. In all other cases, rate for at least three years' CAMC be quoted.
14	Agreement	An Agreement in the format prescribed by the University of Hyderabad is required to be entered into by the Suppliers or their authorized Representative with the University in respect of purchase of Goods / Services valuing Rs. 10 lakh and above, within a period of 15 days from the date of issue of Purchase Order / Work Order. In cases of CAMC, agreements are to be entered into on a case to case basis duly customizing the format of agreement.
15	Performance Security / Performance Bank Guarantee	Successful bidder should submit a Performance Security (in all cases of purchases valuing above Rs. 10 lakhs in the form of Performance Bank Guarantee for an amount equivalent to **3%** of the total basic price of the Goods / Services (exclusive of taxes and duties) within a period of 15 days from the date of issue of Purchase Order/ Work Order. Performance Security should remain valid for the entire warranty period plus additional (grace) period of 60 days, from the date of successful installation of the equipment/item. Performance Security shall be submitted in the form of Account Payee Demand Draft / Fixed Deposit Receipt / Banker's Cheque / Bank Guarantee from any of the Commercial Banks in an acceptable form, drawn in favour of Finance Officer, University of Hyderabad, payable at Hyderabad.

16	Payment	**97 %** of the total cost will be released after delivery, satisfactory installation, commissioning, testing and training (if any), against submission of valid TAX Invoice (with **HSN** code) with GSTIN number of the supplier. The remaining **3%** will be released on submission of a Performance Bank Guarantee (PBG) for an equivalent amount. In case of purchases from foreign manufacturers/suppliers, Letter of Credit (LC) will be opened for 100% of the purchase value and **97%** shall be released after signing the Agreement and shipment / submission of documents. As regards balance payment, it will be released on submission of PBG for equivalent amount (in Indian currency) or completion of the warranty period as per the terms included in the NIT and Purchase Order.
17	Delivery Location	The items shall be delivered to: ***Dean School of Life Sciences* University of Hyderabad, Gachibowli, Hyderabad - 500 046, India**
18	Delivery Period	The supplier should be able to deliver the items within 60 days *(mention the required delivery period by the proposer)* from the date of issue of the purchase order.
19	Liquidated damages for late Delivery	In the event of delay in delivery beyond stipulated period indicated in the Purchase Order, liquidated damages **@ 1% per each week of delay** subject to a maximum of 5% of the cost of the order will be levied and collected by the University, by way of deduction from the payments due to the vendor/supplier.
20	Risk Purchase Clause	If the Supplier fails to deliver the ordered materials within the stipulated delivery period specified in the Purchase Order, the University may resort to procure such items and in such a manner as deemed appropriate, goods or services similar to those undelivered, and the Supplier will be liable to reimburse the University for any excess costs for such similar goods or services.
21	Right to reject	The University reserves the right to reject any or all the bids or accept a part of the quotation without assigning any reasons thereof. The decision of the University in this regard is final and binding on all the suppliers.
22	Resolution of Disputes	Any disputes arising out of this contract shall be referred to the University, and if any of the parties hereto is dissatisfied with the decision, the dispute shall be referred to the decision of the Arbitrator, who should be acceptable to both the parties, to be appointed by the **Vice-Chancellor** of the University. The decision of such Arbitrator shall be final and binding on both the parties.
23	Jurisdiction of Courts	Disputes, if any, arising during the course of execution of the order are to be settled within the jurisdiction of **Hyderabad / Ranga Reddy District Courts** only.
24	Opening of tenders / bids	The bids will be opened in the office of **Dean's Office, school of Life Sciences, University of Hyderabad,** and Hyderabad on a suitable date after receipt of tenders in the presence of bidders or there in the presence of bidders or their authorized representatives. The authorized representative shall bring the authorization letter and submit the same to the University before opening of bids. On failure to do so, the Representative loses the right to participate in the bid opening process.

25	Delay in submission	The University will not in any way be responsible for any postal / courier delay. Bids received beyond the stipulated date and time of submission are summarily rejected. Tenders incomplete in any respect will be summarily rejected.
26	Due date of submission of bids	Sealed Bids should be submitted to the office of **Dean's Office, school of Life Sciences, University of Hyderabad, 500046,** *Dated:23/05/2023 Time05:00PM*Bids received thereafter shall not be considered.

Signature of Dean
School of life Sciences
Phone No. *040-23134500*
E-mail ID: *deansl@uohud.ac.in*