



Bihar Medical Services & Infrastructure Corporation Limited, 2nd & 3rd Floor, Swasthya Bhawan, Behind IGIMS, Sheikhpura, Adjacent to State Health Society, Patna 800023, Phone/Fax: +91612 2283287,+ 91612 2283288

Corrigendum-III

Bihar Medical Services and Infrastructure Corporation Limited (BMSICL) had invited E-Bids from the interested parties for Procurement, Rate contract, Supply, Installation of Medical Equipment vide Tender No.-BMSICL/2025-26/ME-399. During Pre-bid meeting various suggestions were received from different prospective bidders regarding amendment in technical specification of equipment which were discussed and deliberated on by the experts. On the basis of their recommendations certain amendments in the technical specification of the equipment have been made which are annexed as **Annexure-I** of this corrigendum.

Note:-

- 1. Bidders are advised to refer to the Annexure-I of this corrigendum before submission of bid.**
- 2. Those who have submitted their bids are requested to re-submit their bids in accordance with this corrigendum.**

Annexed:- as above

Sd/-
GM (Procurement)
BMSICL

Annexure-I		
Name of Equipment for installation of CAL LAB		
SI. No	Technical Specification as per tender	Final Amendment
1	FOR CAL LAB ESTABLISHMENT	Name of Equipment For establishment/installation of CAL LAB Technical Specification COMPUTER (25nos.)- Computer Specification:- With i5, 8 GB RAM, 1 TB 500HDD, 21-inch Screen, Keyboard and Mouse and printer and Connected to internet (Broadband) along with an AV aids (Multimedia Projector and Screen). The PC Should be installed with CAL Program and Software for teaching experimental Pharmacology. Bioassay of Drugs. ANIMAL SIMULATOR KIT -25 (Software for Computer Assisted Learning -CAL that having followed technical specifications 1. In Vitro experiments - Guinea Pig ileum experiment Dose Response Curve, Guinea Pig Trachea Experiments-Physiological antagonism, Experiments on the isolated, perfused mammalian heart. 2. In Vivo experiments -Effect of Drugs on Blood Pressure - Dog Blood Pressure, Effect of Miotic and Mydriatics on Rabbit Eye , Study the effects of several pharmacological agents on rat blood Pressure and other animal expert. 3. These experiments should include videos of lab protocols and procedures, as well as video patient case library. 4. Option for Easily editing, share and update existing content or create in real-time, as per course requirement. 5. Creating a range of content types including video, audio, images, quizzes and text directly into lessons. 6. Teachers can set timing for the availability lessons/Tests/Assignments as & when required and grant extensions to students if needed. 7. Teachers can choose a grading system and create grade categories where Assignments &/or tests are auto graded. 8. Teachers can create assignments using learning material like YouTube videos, Google Form surveys, or PDFs from the drive. 9. Certifications: - ISO and other safety certifications must be provided.
	COMPUTER – 25 With Standard Configuration and Connected to internet (Broadband) along with an AV aids (Multimedia Projector and Screen). The PC Should be installed with CAL Program and Software for teaching experimental Pharmacology. Bio-Assyy of Drugs. ANIMAL SIMULATOR KIT -25 (Software for Computer Assisted Learning -CAL	
Note- Price of each items as Computer, &printer, Software for running of CAL Lab (Computer Assisted Learning -CAL), AV aids (Multimedia Projector and Screen)) should be quoted separately. L-1 will be decided on the basis of total quoted cost. Suitable Table/Platform for proper installation / functioning of above equipment to be provided and Cost of the Table/Platform will be included in the equipment cost.		

Name of Equipment for installation of SKILL LAB		
SI. No	Technical Specification as per tender	Final Amendment
2	FOR SKILL LAB	Name of Equipment For establishment/installation of SKILL LAB
1	Special Drug Delivery System like Metered dose Inhaler Spacer, Rota inhaler Nasal spray Trans dermal Patches insulin Pumps, Insulin Pen ten Piece each	Technical Specification of Special Drug Delivery System like Metered dose Inhaler Spacer, Rota inhaler Nasal spray Trans dermal Patches insulin Pumps, Insulin Pen ten Piece each (Standard Specifications)
2	Manikins- 25 , for Demonstration of IV injection , Enema, Local Intramuscular injection, Intra cardiac injection and other routes of drug administration.	Technical Specification of Manikins- (25Nos), for Demonstration of IV injection , Enema, Local Intramuscular injection, Intra cardiac injection and other routes of drug administration. Should allow Irrigation of the eye and ear (simulated) Should allow Application/instillation of medications in the eye, ear and nose including nasal packing. Should allow Mouth and denture care procedures. Should allow Insertion and suctioning of oropharyngeal and nasopharyngeal airways. Should allow Insertion, securing, and care of endotracheal tubes. Should allow NG tube insertion, care, medication administration, and removal Should allow Injection sites include deltoid, bilateral thigh, gluteal and ventrogluteal. Should allow genitalia capable of vaginal douching (additional female feature) Should allow Will retain indwelling or straight catheter. Should allow Enema procedures to be performed using fluid for realistic return. Should allow peripheral intravenous therapy and site care Venipuncture is possible in the antecubital fossa and dorsum of the hand Type of Mannikins for Demonstration of routes of drug administration should simulate normal anatomy:- 1. Upper Limbe-Right & left 2. Lower Limbe- Right & Left 3. Head Neck- Front & Back 4. Thorax-Front & Back 5. Perineum-Male & Female 6. Abdomen-Front & Back 7. External Genitalia- Male & Female 8. Pelvis-Male & Female 9. Whole Body-Male & Female

Note- Price of each type of mannequin should be quoted separately. L-1 will be decided on the basis of total quoted cost. Suitable Table/Platform for proper installation / functioning of above equipment to be provided and Cost of the Table/Platform will be included in the equipment cost.

Name of Equipment for installation of CLINICAL PHARMACOLOGY		
SI. No	Technical Specification as per tender	Final Amendment
3	FOR CLINICAL PHARMACOLOGY	Name of Equipment For establishment/installation of CLINICAL PHARMACOLOGY
i.	Digital Sphygmomanometer (05 Nos)	Technical Specification of Digital Sphygmomanometer:- Should be a Digital Blood Pressure Monitoring Device Should come with Battery backup Should have Pulse Rate Indicator Should have Memory Function All parameters should be visible on digital display. Should come with high quality arm cuff. It should be ISO 13485/ BIS/ EU-CE (notified body).
ii.	Critical flicker fusion apparatus- (05 Nos)	Technical Specification of Critical flicker fusion apparatus:- - Display should be available for flicker value. - Light source - LED (RED and Green) - Frequency variation – 5 to 70 Hz
iii	Pupillometer -05 sets	Technical Specification of Pupillometer:- SIMPLE & ACCURATE: Pupillometer is a precision optical instrument used to measure distance between pupils in the process of optometry. Compared with those printable rulers, digital pupillometer adopts high precision sensor and advanced intelligent electronic system to display the measurement results digitally, which is intuitive, accurate and easy to operate. MEASURING ACCURACY: $\pm 0.1/0.2/0.5\text{mm}$ adjustable: 30CM-ADJUSTABLE VISION DISTANCE MULTIFUNCTIONAL: Pupillometer also have the following functions: Stop using for 3 minutes automatically shut down; Shutdown automatic memory last value (No machine operation during this period); 0.5-3.0 degree LED energy-saving lamp brightness adjustable; + 2.00d visual acuity compensation.
iv	Stop Watch digital –(25 Nos)	Technical Specification of Stop Watch digital:- Material Type – ABS Plastic Power – Battery Large LCD display and Accurate function – Can displays minutes, seconds. Multifunctional timer stopwatch – Lightweight, Should serve as stopwatch, clock, chronograph and alarm.

v	Video System to illustrate the Pharmacokinetic and Pharmacodynamic Properties of drugs ADR and Drug administration technique	Technical Specification of Video System to illustrate the Pharmacokinetic and Pharmacodynamic Properties of drugs ADR and Drug administration technique:- 1. Should not less than Fifty five inch LED panel with super bright backlit display Commercial Grade with 3840×2160 resolution having Touch screen facility 2. Panel should operate on both Android and window mode. 3. Panel should include Bluetooth connectivity, USB ports, HDMI ports, High quality Audio, Mic and earphone port, camera port, VGA input, Wi-Fi connectivity, should have true 4K Whiteboard” giving sharp and natural writing experience 4. Should have “Drag and drop” feature through which user can customize the menu as per their own teaching needs 5. Should have Intelligent text recognition” feature which convert any free writing to text at any point of whiteboard session. 6. Should have “Intelligent search” option through user can search inside the whiteboard in Google, YouTube video or Wikipedia for any text written on whiteboard session and save whiteboard session with images and videos used inside the session and automatically save the session. 7. Should have data buffering capacity in case of power failure and save the data automatically in cloud. 8. Should have facility to insert wirelessly image, video, documents directly to whiteboard sessions from any mobile device. 9. Panel should work on voice commands. Control more than 200 different activities (draw different shapes, sizes, search on topics, dictations, etc. In whiteboard using voice commands. 10. Should have a licenced USB Drive/key with Password for animated videos which runs on any media player containing the experiments on Pharmacodynamics and Pharma kinetics. For example – testing of effect of drugs and experimental technique for new drug screenings, Dose Response Curve – Using guinea Pig ileum, To Differentiate between sedative agents and anti-psychotic drugs, Effect of Drugs on Blood Pressure- Dog Blood Pressure etc.
vi	LAPTOP-(01 Nos)	Technical Specification of LAPTOP Laptop Specifications: - Intel i5 processor, 15” or more display, RAM 8GB,

		ITB SSD, Windows original, MS office (original)
Note- Price of each items (Digital Sphygmomanometer, Critical flicker fusion apparatus, Pupillometer, Stop Watch digital, Video System to illustrate the Pharmacokinetic and Pharmacodynamic Properties of drugs ADR and Drug administration technique, LAPTOP) should be quoted separately. L-1 will be decided on the basis of total quoted cost. Suitable Table/Platform for proper installation / functioning of above equipment to be provided and Cost of the Table/Platform will be included in the equipment cost.		
Name of Equipment for installation of PG RESEARCH LAB		
SI. No	Technical Specification as per tender	Final Amendment
4	REQUIREMENT & DEFICIENCY OF EQUIPMENTS FOR PG RESEARCH LAB	Name of Equipment for establishment/installation of PG RESEARCH LAB PG RESEARCH LAB
i	Analgesiometer-04Pc.	Technical Secification of Analgesiometer Tail Flick Type:- To measures pain sensitivity in mice and rats as they respond to heat application to a small area of the tails. Instrument should have following features: Shutter operated lamp illumination system Heating through Halogen lamp of 8V-50W Digital Lamp Intensity controller with Lamp Intensity Range: 1-99% in total 50 steps. Automatic or manual mode for detecting tail flick Cut off Timer to avoid damage to animal Remote foot-switch controls the test start/stop allowing rapid hands-free Experiments Reaction time in seconds with digital timer resolution: 0.1 sec A built-in timer activated by an external foot switch allows the precise measurement of the reaction time. Instrument has provision to add max sequence numbers, auto experiment number and animal sex. PC Connectivity with software for calibration and report generation feature. Instrument should be supplied with one mice & one rat Restrainer Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO Certified. Eddy's Hot Plate Type:- For testing heat induced pain in mice & rat Instrument should have Following features; Plate temperature should be held at a set point between 5 degree C above ambient to 60 degree C (+/- 0.2 degree C) provision in Top LID Sensor to indicate lid is open and there of avoiding Temperature Fluctuations Remote foot-switch controls the test start/stop allowing rapid Hands-free experiments

		PC connectivity with software Instrument should have provision to add max sequence numbers, auto experiment number and animal sex. High temperature stability & Uniform surface heat distribution A built-in timer should be activated by an external foot switch which allows the precise measurement of the reaction time (0.1 Sec. Resolution) Precise and reproducible results. provision for Cut off timer to avoid damage to animal Provision in software for calibration and report generation feature Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
ii	Assembly perfusion apparatus for Mammalian heart -04Pc	Technical Specification of Assembly perfusion apparatus for Mammalian heart The System should include a water-jacketed glass apparatus includes a 100 mL heart chamber with pulley. • Wheel option for force measurement, 10 mL heat exchanger with a 5 mL bubble trap, temperature control unit and reservoir. • A dual pump for the perfusate and heated water, ring clamps and stands with Manipulator. • A Pre-calibrated force transducer having range (0-50g) and automatic zeroing. • The software should have ready-to use experiments with step-by-step instructions for a wide range of experiments including isolated mammalian heart physiology. • Preconfigured Experiments: - Temperature Effects, Starling's Law of the Heart, Drug Effects, Conduction Block, Heart Refractory period, Vagal Escape, neuromuscular Junction: - Twitch Recruitment-nerve, Muscle, force, Latency, fatigue other experiments. • Software controlled recording unit and stimulator and transducer along with accessories. • The software should support high and slow sampling speeds user selectable. • Compatible Computer i5, 8GB RAM, 1TB SSD, 21 inch LED, keyboard, mouse, B/W laser printer to be provided. • Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
iii	Cooks Pole climbing Apparatus for behavioural study-04 Pc	Technical Specification of Cooks Pole climbing Apparatus for behavioral study:- The Climbing pole should be made of Bakelite. The complete chamber and excreta tray should be made of acrylic. DC electrical shocks should range from 100

		µA to 2.8 mA at a frequency of 5 Hz for a controlled duration. The digital timer should have a range of 1.0 to 1000 seconds. The digital "On" Timer should have a range of 1.0 to 100 seconds. The digital "off" timer should have a range of 1.0 to 100 seconds. The digital current meter should measure in the range of 100 µA to 2.8 mA. The complete outer chamber should be made of 10 mm acrylic sheets. Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
iv	Digital PH Meter-04 Pc	<u>Technical Specification of Digital PH Meter:-</u> Machine type- auto Type of PH Meter:-Table-Top Usage/Application:-Laboratory Calibration :- Manual Resolution :- 0.1 Display Type :- Led Type :- Digital pH Range :- 0 to 14.00 Temp. comp. :- 0 to 100 degree C Body Structure: Metal/ABS or any other Power required: 230 V AC 10% 50 Hz, 4 VA Warming time : 5 Minutes Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
v	Electroconvulsimeter-04 Pc	<u>Technical Specification of Electroconvulsimeter:-</u> Electroconvulsimeter should provide with following feature Digital Current intensity: 0mA to 290mA Digital timer: 01 to 10s Should be Provided with one corneal electrodes of size 4mm, 5mm & 6mm each and One should be specially insulated ear electrode suitable for small rodents. Should be Supplied with foot switch Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
vi	Photo-actometer-04Pc	<u>Technical Specification of Photo-actometer:-</u> Useful for assessing loco-motor activity & exploration in rodents. Should be provided with following features Same instrument should be useful for Actometer study and Hole Board Study Minimum lightening conditions required System should be able to use standalone or with computer in Realtime mode. Provided with 16 IR source on X axis and 16 IR source on Y axis creating a 16X16 grid.

		System should have 16 IR Source on Z axis. (Optional) Supplied with Hole board plate Should have provision for Digital timer and digital counts for Actometer as well as hole board apparatus. System is supplied with software for real time display of data on software having features like number of groups, number of animals, study time, experiment time. Software should have grid image indicating exact position of beam broken in real time. Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
vii	Rota-Rod -04Pc	<u>Technical Specification of Rota-Rod:-</u> Rotarod test to evaluate drug effects on motor coordination, balance and motor learning in rodents. Instrument should have following features: Rotarod apparatus should be controlled by an advanced microprocessor which provides precise timing control and accurate speed regulation. Same instrument should be used for mice as well as rat just by changing the rotor, five compartment model, plate type sensor for detection of fall, Diameter for mice rotor: 30mm, Diameter for rat rotor: 60mm Individual lane timers (0-9999.9s) with resolution of 0.1s, Electronic rod speed adjustment-constant speed (2-60 rpm), Software for data collection in online mode, Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
viii	Plethysmograph-04Pc	<u>Technical Specification of Plethysmograph:-</u> Useful for evaluation of anti-inflammatory agents Instrument should have following features: Accuracy: +/- 0.01ml Resolution: 0.01ml Calibration: Manual and auto calibration Instrument should work on principle of conductivity only, not on the basis of load cell. Instrument with inbuilt digital display and memory for storing experiment data of more than 10000 experiments Instrument can be used standalone without need of computer Instrument should display the error messages Instrument should have in built facility for experiment number, sequence number, animal paw, reading averaging options, Left and right paw averaging option without need of computer software. Instrument must be supplied along with PC Connectivity software

		Software should have facility for experiment title, graphical presentation of data & report in pdf Format. Instrument must be supplied with: Paw immersion tubes assembly for rat and mouse, stand for holding immersion tube assembly, Pedal switch, Calibration probes for calibration, Software, Conductivity solution, PC Connectivity cord. Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
ix	Flame Photometer-04Pc	<u>Technical Specification of Flame Photometer:-</u> Range:- Na: 0-100 ppm, k:0-100 ppm, Ca: 15-100 ppm (optional), Li: 10-100 ppm (optional) Sensitivity:- Na: 5 ppm, K: 5 ppm, Ca: 10 ppm (optional), Li: 10 ppm (optional) Readout:- 2.5 Digi Bright Red LED Display Accuracy:- +/-2% upto 40 ppm +/-5% above 40 ppm Ignition System:- Auto Ignition System Measurement System:- Measures one Element at a time Repeatability:- +/- 2 Counts Detector:- Silicon Photodiode Filters:- Narrow Band Interference Glass Filters Nebulizer :- Black Bakelite, Axial Flow Type Flame System:- LPG/Dry Oil Free Air Warm up Time:-Time 10 Minutes Power Supply:-230V, +/-10% AC, 50 Hz Accessories:- Instrument with Na & K Filters Sample Holders Instruction Manual Main Lead Air and Gas Tubing along with end Damps Capacity Tubes Cleaning Wires Drain Pipe Product must be USFDA/EU-CE /EU Declaration of conformity/ ISO 9001 Certified.
Note- Price of each items (Analgesimeter, Assembly perfusion apparatus for Mammalian heart, Digital PH Meter, Cooks Pole climbing Apparatus for behavioural study, Rota-Rod, Electroconvulsimeter, Photo-actometer, Flame Photometer) should be quoted separately. L-1 will be decided on the basis of total quoted cost. Suitable Table/Platform for proper installation / functioning of above equipment to be provided and Cost of the Table/Platform will be included in the equipment cost.		