

Republic of the Philippines NUEVA ECIJA UNIVERSITY OF SCIENCE AND TECHNOLOGY

Cabanatuan City 044-463-0226 www.neust.edu.ph

SUPLEMENTAL/BID BULLETIN

Please be advised of the following amendment for the Project posted in the Philippine Government Electronic Procurement System with reference number: 8226465

Name of Project: Biotechnology Facilities for Onion and Garlic Research

Location: NEUST

Total Approved Budget for the Contract (ABC): 19,932,167.02

Contract Duration: 60 Calendar Days

Fund Source: NEP

Bid Documents: Php 25,000.00

Specifications:

Item No.	Equipment	Specification	Quantity
1	Water Bath	Chamber capacity: approx. 10-17 liters; Temp. range: Ambient to 100°C; Temp. stability: ±0.1°C at 70°C; Temp. uniformity: ±0.2°C at 70°C; 392x555x282 mm); Electrical: 230V, 60Hz Comes with Cover	1 unit
2	Refrigerated Centrifuge with Ultralow Freezer	Refrigerated Centrifuge, -20 to +40 deg C temperature Maximum capacity: 4x200ml Max speed: 12,500-15000rpm (100 rpm increments); Time: 1 second to 99min; 59 seconds continuous run (quick spin/short cycle mode); Includes: 1. Angle Rotor: 12 placer x 1.5/2.0 ml rotor, 2. Angle rotor: 30-32 placer x 0.2ml/0.5ml tube with 30-32pcs tube adapters for 0.2 and 0.5 ml, 3. Swing-out Rotor: 8placer x 15ml conical tube Universal power adapter 110-240V, 50/60 Hz	1 unit

	1		1
		Upright Ultralow Freezer	
		Cooling Technology: Dual System	
		Visual/Acoustic Alarm	
		Power Failure Alarm	
		100% HCFC/CFC Free	
		Max Shelves: 4	
		Max load per shelf: 25kg	
		Castors: 4	
		Interior material: Stainless Steel	
		Exterior Material: Electrogalvanized Steel	
		Temperature Range:40/-86°C	
		Max Ambient Temperature: 25°C	
		Capacity: 630-642 liters	
		Power Supply: 230V	
		Frequency:50-60Hz	
		Versatile high-throughput plant and animal tissue homogenizer/cell lyser	
		with a unique vigorous up-and-down or side by side grinding/pulverizing	
		action; Handles two standard deep-well titer plates or multiple sample	
		tubes and one standard for automatic filling of liquid nitrogen LCD	
		screen displays both the full-timer setting along with the minutes and	
		seconds remaining in the grinding cycle; Simple controls allow the	
		operator to set the run time and precise grinding speed; Safety	
		interlocks for safe operation;; Automated disruption of plant and animal	
		tissue provides reproducibility and increased yields; Elimination of	
	Tissue	cross-contamination	
	Homogenizer with	Separate Homogenizer for Automatic Filling of Liquid Nitrogen and	4 1
3	Plant Growth	manual filling of LN2	1 set
	Chamber		
		Includes:	
		Grinding adapters for reaction vilas:0.2 & 2ml	
		Grinding Adapters for 50ml	
		Grinding balls/beads	
		Cryo kit for cooling the grinding jars with liquid nitrogen	
		Grinding containers for 50ml	
		Adapter for 2ml	
		Auto fill liquid Nitrogen connection and safety valve	
		Plant Growth Chamber	
L	1	i idit Growth Chamber	

		Capacity: at least 403 L Capable of running Temperature range at 10°C to 50°C (light on and off) with illumination, without illumination 5-50°C Programmable light cycle with maximum illumination range of 0-12,000 lux from fluorescent light source 5 grade adjustable Power supply: 220 VAC,50-60 Hz	
4	Liquid nitrogen containers	Liquid nitrogen container, 2L	5 containers
5	Refrigerator	Chiller, Upright Glass Door Pharma Chiller: approx 110 cubic feet, approx298 Liters Volume Capacity with 256 watts Power input, with digital temperature controller, 2 deg C to 8 deg C temperature range with approximate 1757 mm Hx 535mm W x660 mm D external extension	2 unit
6	Freezer (no frost)	Upright Curved Solid Door freezer, approximately 120 cubic feet/340 liters volume capacity, fully static Vapor System, 220 volts/60 Herts compressor, evaporating plates, plastic coated wire shelf, temperature range: -5 deg to -20 deg C with approximately external dimensions: 1757 mm x535 mm Wx660mmD	1 unit
7	Showcase refrigerator	Showcase refrigerator, (WxDxH) mm of 1800x750x1965, External size, approximate 1500 L Capacity, 2-8 deg C temperature range, 01 deg C temp accuracy with microprocessor control and large screen LED display Alarm control system, 12 pcs adjustable shelves made of high quality steel wire, 150W consumption, AC220V±10%, 50/60Hz power supply, fluorescent lamp, shelves door keys standard accessory with 3KVA UPS, with ISO 13485, 9001 and CE compliance	1 unit
8	Ice Maker	Flaked ice maker machine; Produces approximately up to 440 lb/day and stores 80 lb; High grade stainless steel evaporator for max durability; Heavy-duty greaseless bearing for reduced maintenance; Reusable external air filter for easy cleaning; Easy-reach slide back door; non-ozone depleting R-134A refrigerant; Only 24 in. wide; Optional floor mount kit reduces height to 33.5" for lower benches; CUL/US, ISO and NSF listed; Power cord included	1 unit

9	Water purification system with DNA Qualifier	This equipment incorporates a pre-filtration unit and a reverse osmosis membrane. The pure water collects in an integrated tank and is finally circulated through the polishing module by a circulation pump. The user can extract either Type III water from the built-in 7 I storage tank or Type I water from the dispenser with a quality of 0.055 μS/cm, equivalent to 18.2 MΩ-cm, and TOC of between 1 and 10 ppb, depending on the system type. The RO water quality is displayed as well. The equipment can cost-effectively produce small amounts of analytical-grade water. The water quality exceeds all relevant standards including ASTM Type I, CLSI and ISO 3696 Type I. System can be upgraded with 30 I storage tank. DNA Qualifier Instrument Control: Built-in touchscreen Minimum Sample Volume: 1ul Limit Detection: dsDNA Pedestal: 2.0 ng/ul Cuvette:0.2ng/ul BSA (IgG): Pedestal: 0.06 (0.03) mg/mI Max Concentration: dsDNA: Pedestal: 27,500mg/mI Measurement Repeatability: Typical 0.002A (1.0mm Path or 1% CV whichever is greater Measurement Wavelength Range: 190-850nm Accuracy +/- 1nm Photometric Range: 10mm equivlent Pedestal: 0-550A Cuvette: 0-1.5A Resolution: Bandwidth less than or equal to 1.8nm PAthlength: 0.300 to 1.0nm auto-ranging Light Souce: Xenon Flash Lamp Detector: 2048 elements, Operating System: Android Power Consumption: Operating 12-18W	1 unit
10	PCR machine	Thermal Cycler Sample capacity 96 x 0.2 ml tubes, 0.2 ml tube strips, or 1 x 96-well plate Maximum ramp rate, °C/sec 4 Average ramp rate, °C/sec	3 units

		Z.5 Temperature range 4–100°C Temperature accuracy ±0.5°C of programmed target Temperature uniformity ±0.5°C well-to-well within 30 sec of arrival at target temperature Input power 100–150 VAC, 50–60 Hz; 220–240 VAC, 50–60 Hz; 700 W maximum Display Approx. 5.7" VGA color touch screen Port 1 USB A Memory 500 typical programs; unlimited with USB flash drive expansion Gradient Gradient Gradient range 30–100°C Temperature differential range 1–25°C	
11	vortex mixer	Speed: 0 to 3000 rpm; Load bearing capacity: 0.5 kg(1.1 lb); Operating modes: continuous/touch; Plug type: Cord set with various plugs; Dimensions (LxWxH) Exterior: 210x154x83 mm; Electrical: 230V, 50Hz	2 units
12	centrifuge for PCR plates	Max Volume: 4 x 100 ml; Max. Speed: 15000-18000 rpm; Max. RCF: 21,000-23542 x g; steel sheet housing resistant against shock and chemicals; Digital display of preset and actual speed/RCF, temperature and time; Quick key for short runs with corresponding digital display of elapsed time in seconds; Automatic imbalance indication with safety cut off; CFC-free refrigeration system; Maintenance-free induction motor; Motor-driven lid lock; Audio signal after stop Includes: 2 place swing out-rotor for PCR Plates with suspensions, lid and plate removal frame	2 units

13	Weighing balance	Analytical balance, 320grams, 0.001 grams, internal cal analytical balance	1 unit
14	UPS	22000VA/1980 watts, IEC C20 (16A Socket) with 30-45 minutes estimated back time, 5PX External Battery module with Eaton 5PX EBM 48V RT2U (1 5/2 2KVA)	1 unit
15	Single Channel MicroPipettor , 1- 10 uL	SterileNo AutoclavableYes Max Volume (µL)10 Min Volume (µL)1 Min Volume (mL)0.001 Max Volume (mL)0.001 Min Dispensing (mL)0.0001 Max Dispensing (mL)0.01 Increments (µL)0.02 Accuracy (%)±1.00% Number Of Channels1 Tip EjectorYes	1 unit
16	Single channel MicroPipettor; 5-50 uL	SterileNo AutoclavableYes Max Volume (µL)50 Min Volume (µL)5 Min Volume (mL)0.005 Min Dispensing (mL)0.005 Max Dispensing (mL)0.05 Increments (µL)0.1 Accuracy (%)±1.50% Number Of Channels12 Tip EjectorYes Color Code	1 unit
17	Pipette Tips, 5 mL; 3000/Bg Mfr # 9402010 – Item # EW-25001-79	SterileNo Max Volume (µL)5000 AutoclavableYes Max Volume (mL)5 Tip Volume (mL)5 Max Dispensing (mL)5 Overall Length (in)5.375 Overall Length (mm)136.52	1 unit

		Wetted MatterialVirgin polypropylene Package OfBulk; 3000/bg DescriptionPipette Tips, 5 mL; 3000/Bg	
18	UPS	Output power capacity: 27Kwatts/ 3.0 KVA, Nominal Output Voltage: 230V, Output Voltage Note: Configurable for 220:230n or 240 nominal output voltage, Output Voltage Distortion: Less than 5% at full load, Output Frequency (sync to mains): 47-53 Hz for 50 Hz nominal, 57-63 Hz for 60 Hz nominal, Topology, Line interactive, Waveform type: Sine Wave, Output Connection: (8) IEC 320 C13 Battery	1 unit
19	Thermomixer	Temperature Range:1 to 100 °C; Timer: 15 sec to 99:30 h, continuous; Speed Range: 3000rpm; Accuracy: Max. ±0.5 °C at 20 – 45 °C; Heating and mixing in 0.5/1.5/2.0 mL reaction vessels (F0.5/F1.5/F2.0) or plates (FP); Efficient mixing up to 1,500 rpm (F1.5/F2.0) or 2,000 rpm (F0.5/FP); Excellent mixing performance due to unique 2DMix-Control technology; Anti-spill technology prevents lid wetting and cross-contamination; Reliable prevention of condensate formation with the new Simple and intuitive operation using predefined temperature keys (37 °C, 42 °C, 56 °C, and 95 °C); Very quiet operation via precise fit of vessels in block; Heat-insulated Eppendorf SmartBlocks for ergonomic operation - user won't burn fingers	1 unit
20	Agarose tank with power supply and wirings	Horizontal Agarose Electrophoresis, approx. 26x32 cm UV Tray, 6x28 sample combs, loading guides and free flexicaster, with, Power Supply 300V 400ma 60 W-110/230V, with 1 unit 26x24 cm UV tray and 1 unit 26x16 cm UV tray	2 units
21	Gel Documentation System	Fluorescence: Yes (stain-free imaging and UV-excitable dyes); Colorimetry/densitometry: Yes; Gel documentation: Yes SYPRO Ruby, Coomassie, Fluorescent Orange, or Krypton Stains; ethidium bromide, GelGreen, Gel Red, SYBR® Safe, SYBR® green, or SYBR® Gold dyes; Maximum sample size:approx 11.2 x 15 cm (4.4 x 6 in); Maximum image area:approx.11.2 x 15 cm (4.4 x 6 in); Excitation source: Trans UVB (302 nm); Illumination control: 2 modes: Trans-UV, Trans-White, UV tray: 280-400 max 300 nm, Blue tray: 430-460, max 440 nm, White tray: visible spectra, Stain-free tray: requires stain-free gels; Detector:CCD; Image resolution:1392 x 1040 pixels (1.4megapixels); Emission filters:Tray-based; Dynamic range: >3.0 orders of magnitude;	1 unit

		Pixel density (gray levels): 4,096; Application-driven; user-selected or recalled by a protocol; Controlled by a protocol via application-specific setup for image area, illumination source, filter, analysis, and reporting; 100% repeatability via recallable protocols, from image capture to quantitative analysis and reports; Precalibrated focus for any zoom setting or sample height; Image flat fielding: Dynamic; precalibrated and optimized per application; Auto-exposure 2 user-defined modes (intense or faint bands) Includes: Computer with Monitor and Printer compatible with the Software	
22	Spectrophotometer	Microplate types: 6-, 12-, 24-, 48-, 96-, and 384-well microplates; Wavelength selection: Monochromator or Filter wheel system Wavelength range: 200 - 999nm, selectable in 1nm increments; Light source: Xenon flash lamp; Dynamic range: 0.0- 4.0 OD; Bandpass: 5nm; Shaking: Orbital, double orbital and linear; Temperature control: Ambient +4° to 65°C with condensation control; Connectivity: USB for external PC control; USB for peripheral devices; Power: 100-240V 50/60Hz	1 unit
23	Autoclave	20L, Compact Space Saving Analogue model with 3KVA AVR	2 units
24	Liquid Nitrogen Tank	Capacities from 25 to 50 Liters; Tight closure and easy access; Features include a ribbed, high-strength aluminum body with a magniformed neck tube design, a snap-on cap and neck tube for tight closure and easy access; includes liquid withdrawal device, tipping stand, dippers and roller base	1 unit
25	Drying Oven	Gravity convection; Temp Range: +50°C to 300 °C; chamber vol: approx 774L/27.3 cu ft.; no. of shelves: 39 maximum; shelf load: 40 kg	1 unit
26	PAGE Tank/set with 10 sets extra glass plates	Vertical Electrophoresis System; screens up to 204 samples simultaneously; 102 well microtitre-compatible comb is designed to run 96 samples plus controls on each side so that results from 2 microtitre plates cans be analyzed simultaneously; with cooling chamber and coolant recirculation ports, Platinum electrodes, Long-lasting silicone gaskets, Safety cover with power leads, White spring clamps, 2 combs,	1 unit

		2 sets of Gel Wrap®spacers, 2 sets of Gel Wrap glass plates, 2 lengths of Gel Wrap gasket, Conversion plate for running one gel at a time	
27	PAGE Voltage Regulator	Maximum Power Output: 3000VA; Servo Motor Control; Input Voltage: 190-250V AC; Output voltage: 110V & 220V AC	1 unit
28	Acrylamide Tank (Vertical Rigs) with power supply and wirings	Large Formal Vertical Electrophoresis, DNA sequencing unit, 33cm wide no caster included, with glass plates Pk/2 notched, Glass Plates, Large Glass plate rack, caster for and, spacer set 15mm and samples, 0.35 mm Thick with 500V, 400mA 120W-110/230V (P42, 504 00)	1 unit

29	Computer Set	I7 processor, 16GB memory, I TB Hdd + 256 SSD, 4gb graphic card, motherboard onboard gbLan, audio, casing with 650w psu, 23" led monitor, usb Keyboard and Mouse, UPS/AVR, Licensed windows 10	1 set
30	Printer	Colored A3, Duplex, ADF, LCD, print, scan, copy, wifi, Ecotank CIS 4 colors	1 unit
31	Laboratory table and chairs	0.90M (H) x 1.00M(W) x 2.5M(L) • Chemical Resistance countertop (18mm Thickness) • 2 Base cabinet back to back with swing doors and handles • Center cabinet with 3 drawers and locks • Faucet and sink with DC motor for internal water supply • 4 electrical outlets • 8 lab stools each table	3 sets
32	Eyewash station with shower	Heavy-duty, High Quality Designed for freestanding / Wall station Twin aerated spray heads Eyewash bowl Overhead shower head 304 Stainless steel construction Hand operated flag handle switch valve, treadle switch valve, pull rod lever	3 sets
33	Fumehood	• 2400mm HEIGHT X 600mm WIDTH X 1000mm LENGTH	1 unit

		DUENOUS DECINION OF THE PROPERTY OF	
		• PHENOLIC RESIN COUNTERTOP (20mm	
		THICKNESS)	
		METAL CASING WITH BASE CABINET WITH	
		DOOR	
		& HANDLE (CHEMICAL RESISTANCE)	
		POWDER	
		COATED WITH TAMPERED GLASS	
		• 1-POLYPROPYLENE CUP SINK	
		(CHEMICAL RESISTANCE	
		• 1-LABORATORY GOOSENECK FAUCET	
		(POWDER COATED)	
		• 1-UV LIGHT 40 watts	
		• 1-2HP BLOWER EXHAUST (SINGLE	
		PHASE)	
		• 1-HEPA FILTER	
		• 1-ELECTRICAL SWITCH	
		• 1-ELECTRICAL OUTLET 2 GANG	
	Laminar flow with UV lamp	Laminar Flow Cabinet	
		Work Surface Height:approx 750mm	
		Display: LCD Display	
		Airflow Velocity: Average of 0.3~0.5m/s	
34		Pre-filter: Polyester fiber, washable	1 unit
34		HEPA Filter: 99.999% efficiency at 0.3um	1 Utill
		Noise: <60dB	
		UV Lamp: 30W*1, Emission of 253.7 nanometers	
		Standard Accessory: LED lamp, UV lamp*2,Base stand, Gas Tap,	
		Waterproof socket*2	
		40X – 100X MAGNIFICATION MONOCULAR STUDENT COMPOUND	
		LIGHT MICROSCOPE	
		• Four Magnifications: 40x, 100x, 400x, and 1000x.	
35			
	Compound microscope		3 units
		· ·	
		,	
35	•	 Eyepiece Included: Wide Field 10x. Pointer Included in Eyepiece. Four DIN Achromatic Objectives: 4x, 10x, 40x, and 100x (Oil Immersion). Spring Loaded 40x and 100x Objectives to Protect Slides. 45 Degree Inclined Monocular Head, Rotatable 360 Degrees. 	3 units

		 1.25 N.A. Abbe Substage Condenser, Condenser Movement Knob, Iris Diaphragm and Swing-Out Filter Holder. Full Light Condenser with Condensing Lens! This is not the cheap version with simple holes of varying diameter. Filters Included: Green, Blue, Yellow. Fine and Coarse Focusing Knobs on Both Sides of Microscope. Tension Adjustable Coarse Focusing. Adjustable Screw-Stop to Limit Coarse Range to Protect Slides. Total Overall Height of Microscope: approx 15 Inches (390mm). The Base is approx 8x7 Inches (210mm x 170mm). Instrument Weight: 8 lbs. Includes: Instruction Manual, Bottle of Immersion Oil, Extra Bulb, and Dust Cover. 	
36	Incubator oven	Dual Purpose Oven/Incubator - 50L Capacity: 53 Litres Temp Range: +5 to 70°C Fluctuation: +/-0.25°C High Resolution: 0.1°C Steriliser Temp. Range: 40 to 250°C Internal Dimensions: approxH330 x W490 x D290mm External Dimension: approx H660 x W630 x D610mm Shelves: 2 Shelf Positions: 3 Wattage: 500	1 unit
37	UV-Visible Spectrophotometer with PC	UV-Vis Spectrophotometer All systems allow data collection across the full 190–1100 nm wavelength range and have variable spectral bandwidth that can be selected between 0.1 to 5.0 nm at 0.01 nm intervals. system also includes everything needed to start collecting data (comprises two quartz cuvettes, a cuvette holder tray, and standard for instrument performance testing and qualification) Compact module: double beam systems with a reference and sample position	1 unit

	Multicell Module: double beam systems with eight cuvette positions (combinations of reference and sample possible) UV Workstation software: automatic module recognition, streamlined method setup and built-in calculations for data analysis UV-Vis engine: Xenon flash lamp, double out-of-plane monochromator for fast data collection, high light throughput and high absorbance range Desktop PC package: i5, 16GB memory, I TB Hdd + 256 SSD, 2gb graphic card, motherboard onboard gbLan, audio, casing with psu, 23" led monitor, usb Keyboard and Mouse, AVR
38 Microscop came	I HOU

39	Ultrasonicator	Series Digital Ultrasonic Baths Frequency technology provides more homogeneous ultrasonic activity throughout the tank, reducing dead spots and standing waves Heated ambient +5°C to 70°C SD port allows easy validation tracking between series and PC. Improved software memory logs cleaning parameters allowing easy cycle repeatability and easy traceability of cycle number, time, temperature and sonics validation LCD Display - easy to use digital LCD control panel with user - settable parameters to suit individual requirements. Intelligent software remembers last cycle cleaning setting and accurate fluid level sensors to ensure bath is not under-filled prior to or during the cycle Accurate process control of time, temperature, ultrasonic activity, degas and power Stainless steel basket - designed specifically to generate maximum ultrasonic activity, prevent items resting on the tank and prevent operators coming into contact with chemical solutions. Included as standard. Ergonomic plastic lid - reduces noise volume and minimizes potential of aerosol escape. Included as standard. Lid and basket form a drip collection unit, minimizing flow of contaminated liquid once cycle is finished Drain valve for convenient emptying Stainless steel basket, ergonomic lid, SD card and one bottle of ultrasonic solution included as standard Adjustable power that can be reduced from 100 to 50% in 5% increments Approx. 25L capacity	1 unit
40	Hybridization Incubator	Temperature adjusts from ambient to 99.9°C (±0.1°C) via touch- sensitive keypad Speed varies from 10 to 15rpm to provide consistent saturation of samples during washing or hybridizing Adjustable rpm knob slows down rotary wheel for removal of samples Rotary wheel can be removed and replaced with optional Rocker Plate (sold separately), enabling all hybridization protocols to be performed in one unit	1 unit

Protective tray removes for quick, easy cleanup of spilled media Rotary wheel holds up to twenty 35 x 150mm and ten 35 x 300mm bottles at once; also holds four 75 x 300mm bottles with carousel kit	
Large LED continuously displays temperature inside the chamber.	

Additional requirements:

- 1-Year: All unit components are warranted for 1-Year, Supplier will supply new component of equal or better quality to replace the failed component.
- Bidder should provide 5 days or equal to 40hours training at site free of charge
- Service Warranty: Lifetime Free service warranty, which includes Semi-Annual REGULAR PREVENTIVE MAINTENANCE

All terms, conditions, specifications, and instruction to bidders specified in the Bidding Documents inconsistent with this Bid Bulletin are hereby superseded and modified accordingly.

For information and guidance of all concerned.

Issued this 7th Day of December 2021.

ENGR. HONORATO P PANAHON, Ph. D. BAC Chairperson