

**SCHOOL OF BIOLOGICAL SCIENCES**  
**UNIVERSITY OF THE PUNJAB**  
**Tel: 35953150 Fax: 99230980**

**TENDER DOCUMENTS**

Sealed Tenders (single stage one envelope basis) are invited from the GST & Income Tax registered Manufacturers Firms /Sole Distributors/ Exclusive Dealers & Suppliers for the supply of following mentioned item (F.O.R basis Lahore) for the HEC funded project # NRPU8527 titled: **“Optimization of Simultaneous Liquefaction and Saccharification: a Novel Process Developed by Using Newly Discovered Thermoacidophilic Pullulanase”**. Tenders shall be received up to 04-08-2022 (01:00pm) and shall be opened by the Institutional Purchase Committee on same day at 02:30pm in the presence of the bidders or their authorized representatives who may wish to attend.

**LABORATORY EQUIPMENTS (Estimated Cost 4.4 million)**

- 01. Sonicator/Ccell Disruption System (01No.)**  
Power Rating, 700 Watts, Programmable Timer, 72 Hours; adjustable Pulse On/Off for 1 Second to 24 Hours, full amplitude controlled from 1-100% ; 10 memories plus sequencing programmability for processing times, pulse on/off and amplitude can be saved to memory ; pulse mode with adjustable pulse on and off times; temperature monitoring with an optional temperature probe and overheat protection. multiple programs run in sequence, total energy output display both in watts and joules; auto tuning; overload protection; automatic fault detection and shutting down; touch screen/ lcd control. Included with: Generator, Converter, 1/2” diameter probe with replaceable tip, power supply, Power cable, Converter cable, Wrench set, Integrated Sound Proof Chamber, Adjustable Height Sample Table, 1" diameter probe with replaceable tip (optional), Continuous flow Floccell (optional), Microtip probe (optional). Warranty with parts: At least One year preferably longer, Warranty will start from the date of installation.
- 02. Shaking Oil Bath/Water Bath (01No.)**  
Luminous digital LED display; No heaters, sensors or other fittings in the bath vessel; Interior & exterior stainless steel; Top covered with stainless steel cover, Temp Range 5-100 °C or better.; Temperature fluctuation 0.5 °C; Over temperature alarm protection, auto diagnostic system; Digital timer 1min to 99hr or better; Capacity 20 Liters; Warranty with parts: At least One year preferably longer, Warranty will start from the date of installation.
- 03. UV/VIS Spectrophotometer (01No.)**  
Wavelength Range and Accuracy, 190 - 1100nm  $\pm 0.3$  nm for entire range;  $\pm 0.1$  nm at D2 peak 656.1nm; Photometric Range, -4 to 4 A ; Photometric Accuracy,  $\pm 0.002$  Abs at 0.5 Abs;  $\pm 0.004$  Abs at 1.0 Abs;  $\pm 0.006$  Abs at 2.0 Abs; Photometric Noise, Less than  $\pm 0.00005$  A (at 700 nm) ; Photometric repeatability, Less than  $\pm 0.0002$  A at 0.5 Abs;  $\pm 0.0002$  A at 1 Abs;  $\pm 0.001$  A at 2 Abs; Baseline Flatness,  $\pm 0.0006$  A (1100 to 190, one hour after light source turned ON); **Light Source** : Halogen lamp for Visible range; Deuterium Lamp for UV range, light source should be auto automatically selected as per wavelength required.; **Detector**: Silicon Photodiode dual detector/PMT; **Scan Ordinate Modes**: Absorbance, % Transmittance, % Reflectance; **Resolution**: 0.1nm or better; **Wavelength Range**: 185 –1100 nm; **Wavelength Accuracy**:  $\pm 0.3$ nm or better for entire range; **Wavelength Repeatability**:  $\pm 0.1$ nm or better; **Scanning Speed**: Selectable Variable wavelength scan rate 2nm/min to 3000 nm/min or better; **Spectral Bandwidth**: Variable (0.2/0.5/1/2/4 or 5) nm; **Stray Light**: 0.02% (220 nm NaI) or better, 0.02% (340,370 nm NaNO<sub>2</sub>) or better, 0.5% (198 nm KCl) or better.; **Noise**: less than 0.00005 Abs (700nm) or better; **Drift**: < 0.0005 A/hr (500 nm, 1-hour warm-up); **Baseline flatness**:  $\pm 0.0005$  Abs or better; **Integral accessories**: Compatible automatic online UPS, 3kVA or better (Infosec, APC, Systek or equivalent).

- 04. Water Still (01No.)**  
 Quality of water: Should deliver Type I/Ultra– pure as per International specifications as follows:  
 Electrical Resistivity Min. 18.2 MΩ/cm @ 25°C ; Conductivity 0.055 μS/cm compensated to 25°C ; TOC level (system with UV lamp) 1 lit / min ; Bacteria 0.22μm) < 1 ; Chloride (ppb) < 1 ; Total Silica (ppb) < 3 ; Pyrogens < 0.001 Eu/ml; RNases free, < 1 pg/ml; DNases free, < 5 pg/ml; Storage: System should come with an inbuilt storage system of 5-8 L to store consistently high-quality pure water for prolonged period and prevent Contamination by ambient air.; Feed water: Should have separate feed water (Potable tap water) specific purification cartridge and application specific polishing cartridge; Consumable: Must Quote separately for consumables (cartridges, filters etc.) for ONE YEAR for trouble free working. Accessories: All cartridges, filters, pump or any such item which is /are essential for Installation and functioning /operating the equipment.;
- 05. Water Still (01No.)**  
 Output: 4-5 Liters; Preferably Double Distillation stages; Conductivity (w/ Treated Water): 1.5 to 2μScm or better; pH : 5.5 to 6; Min. Pressure: 2-5 psi along with guage; Water supply: Minimum 0.5 - 2 Liter / min; Warranty with parts: At least One year preferably longer, Warranty will start from the date of installation.
- 06. Deep Dreezer (01No.)**  
 Deep freezer vertical model with removable racks, Temperature range -20C° or lower, at least size 18 Cubft, single door, supplied with 3000 watt stabilizer.
- 07. Chromatography Column (01No.)**  
 29219757 Cytiva Superdex 30 Increase Tricon 10/300 GL Prepacked SEC column Fisher cat no.15729140 or equivalent.

#### **TERMS AND CONDITIONS:-**

##### **1. General:**

- 1.1** Any offer not received as per terms & conditions of the tender enquiry is liable to be ignored and also no offer shall be considered if:
- The bid is not prepared and submitted as per instructions given in the tender document
  - Received without earnest money.
  - Received without detailed technical literature, in original, from the manufacturer
  - Recived without verifiable office addresses, Telephone No., E-mail addresses of the bidding firm as well as the manufacturer
  - Recieved without the proofs for availability of company trained certified engineer for installation/commissioning/after sale service of quoted equipment/machine
  - Bid is received after the time and date fixed for its receipt.
  - Not signed & stamped by authorized person on tender documents.
  - The offer is ambiguous.
  - The offer is received by fax or e-mail.
  - The offer is from a black listed firm.
  - Offer received with shorter validity than required.
  - The offer is for store not conforming to specifications indicated in the tender enquiry.
  - Any conditional offer.
- 1.2** Offered rates will remain valid for a period of 150 days after bid opening. No change in price will be made in case of Pak rupees depreciation against foreign currency.
- 1.3** The cover envelop should indicate particulars of tender, date of opening and the envelope must be properly sealed.
- 1.4** In case, the bidder fails to execute the contract in accordance with the terms and conditions laid down in the contract, bid money will be forfeited.



- 1.5 The bidder should indicate their National Income Tax No. / Sales Tax No. and circle of Income Tax Department.
- 1.6 The contractor will be responsible for the free replacement of supplied item if the same is found to be substandard and or at variance with the specifications given in the supply order. Items offered of specifications superior to the one specified in the tender enquiry may be accepted subject to the approval of competent authority.
- 1.7 Items should be brand new and by original manufacturers having well reputed history. Provision of verifiable office addresses, telephone numbers and E-mail addresses of original manufacturers will be mandatory.
- 1.8 Offered rates will be on basis of free replacement (installation/commissioning).
- 1.9 All Tenders can be cancelled by the Competent Authority before acceptance of the bid (s) as per PPRA Rules 2004, Clause 33.
- 1.10 Offer must be supported with comprehensive technical literature in original and containing complete details of the manufacturer (i.e., official addresses, official website, telephone numbers E-mail addresses and of customer support etc.). Ambiguous documents/photocopies/unauthorized computer prints may not be accepted. Provision of specifications in original (English) for the materials/goods offered will be mandatory. Bid is liable to be disqualified if relevant literature/specifications are not attached with the offer.
- 1.11 Bids will be evaluated by the departmental Technical Committee on cost and quality basis.
- 1.12 In case of local supply, prices should be inclusive GST.
- 1.13 The specifications/details can be obtained from the office of the School of Biological Sciences, University of the Punjab, Lahore during the official hours at a cost of Rs.1,000/= non refundable.
- 1.14 Bids should be on FOR basis Lahore.
- 1.15 Please avoid quoting alternative offers. Alternative offers will not be considered.
- 2. Delivery Period:**
  - 2.1 Delivery period is 90 days after issuance of Purchase Order for the procurement required for local purchase. The equipments to be provided should be of original make/genuine quality. The contractor shall stand guarantee for the equipments for a minimum period of one year.
  - 2.2 The contractor will be responsible for the free replacement of supplied item if the same is found to be substandard and or at variance with the specifications given in the supply order within 30 days. Items offered of specifications superior to the one specified in the tender enquiry may be accepted subject to the approval of Competent Authority.
- 3. Extension of Delivery Period:**

In special circumstances, request for extension of delivery period may be considered by the approving authority on the written request of the firm before the target date of supply.
- 4. Cancellation & Penalty of Delay:**
  - 4.1 In case of delayed supply, the purchaser may cancel the supply order or impose appropriate penalty. The penalty will be as per University laid down rule (i.e., deduction would be made @ 2% per month in case of late delivery).
  - 4.2 In case, the bidder fails to execute the contract in accordance with the terms and conditions laid down in the contract, bid money will be forfeited.
- 5. Payment to the Contractor:**
  - 5.1 Payment will be made through crossed cheque to the supplier against invoice after 100% completion of delivery and commissioning after satisfactory performance against the purchase order.
  - 5.2 Payment against partial supply will not be made.



**6. Bid Money:**

- 6.1** Fix bid money of 02% for the estimated cost of the tender will have to be deposited along with the tender. It should be in the form of Pay Order/Demand Draft in favour of Principal Investigator, School of Biological Sciences, University of the Punjab, Lahore.
- 6.2** Bid money of successful bidder shall be refunded on successful completion of the warranty period. Whereas bid money of unsuccessful bidders will be refunded on the approval of the tender by the Competent Authority.

**7. Inspection:**

The equipments will be inspected by Technical personals of School of Biological Sciences, University of the Punjab, Lahore who will coordinate with the contractor in lieu of required job as per tender requirements, specifications quality and terms of the contract.

**8. Deduction of Taxes:**

Any taxes (if applicable) will be deducted while making payment as per Government instructions/notifications.

**9. Payment of Sales & Other Taxes, Duties, Levies:**

All taxes and any other duties if applicable will be liability of the firm. Purchase & Services shall be made from the firm registered with income tax and sales tax under Punjab Revenue Authority if applicable.

**10. Dispute Resolution:**

In case of any dispute before or after the execution of contract, matter will be resolved as per PPRA Rules 2004 Clause 48 & 49.

**11. Preparation of Technical Bid:**

Bids should in the form of a single folder in properly bound form. Following points may be kept in mind while preparing Technical Bid:

<b>a.</b>	Make & Type of quoted items (Technical compliance with BoQ)	Provide detail of items, brands, country of origin with complete specification being offered on company letter head (duly signed and stamped beneath by the bidder).
<b>b.</b>	Brief Profile of the Firm	Mention Company Introduction , Type of Business , Offices & Services in Pakistan , NTN & GST Registration Number with Copy of NTN & GST Certificates , Professional Staff (Administrative & Technical) , Verifiable Office addresses, Telephone & Cell No., E-mail address for Contacts.
<b>c.</b>	Details of Experience	Provide list of contracts in-hand/ performed by the bidder so far clearly mentioning for each contract, the name of organization, complete address, year of contract, contract value, date of contract award and date of contract completion.
<b>d.</b>	Reliability of quoted Brand & Country of Origin.	Provide supported documents like original brochures/technical literature depicting detailed specifications as well as complete details of the manufacturer.
<b>e.</b>	Bidder's corporate Status	Whether the bidder firm is: Manufacturer, Business Partner of Manufacturer, Sole Distributor of Manufacturer, Authorized Distributor/Agent/Reseller/Supplier or any other affiliation <b>Note:</b> Provide certificate/letter issued from manufacturer.
<b>f.</b>	Technical Resources & Services Support	Details of firm's ability / facility available for provision, installation, upgrading, training and after sales services.

<b>g.</b>	Warranty/Guarantee	The bidder shall offer at least 01 year warranty/guarantee (where applicable) or standard warranty terms of manufacturer and free of cost after sale service.
<b>h.</b>	Consignment completion period	Firms should specify the completion period from the date of issue of Purchase / Work Order

## 12. Eligibility Criteria:

- Manufacturers, Exclusive/Authorized Dealers, Suppliers (Firms).
- Copies of Sale Tax/Income Tax registration certificates.
- For quoted items, distributor must submit the sole distribution certificate with bid that will be checked later on and verified from the issuing company.
- At the time of delivery, import documents will be checked.
- All softwares, accessories, consumables etc. required for complete functioning of an equipment/scientific instrument should be included in the quoted price. No quote for any optional item will be entertained unless stated otherwise.
- The bidders also have to provide documents proving the availability of trained certified engineer (s) for installation and services of their quoted scientific instruments.
- Warranty will be at least for one year preferably for longer period. Warranty period will start from the date of installation.

**NOTE (i)** Above mentioned Technical Criteria documents must be attached, failing which will leads towards disqualification of the bid.

**(ii)** Bidders are requested to send soft copies of the tenders in Microsoft word format at below mentioned E-mail address after opening the tender on immediate basis. [gulnayabsbs@gmail.com](mailto:gulnayabsbs@gmail.com)

## BILL OF QUANTITY (BoQ)

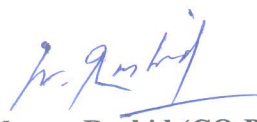
Sr#	Name of Items	Specifications	Qty	U Price	Total Price
(1)	<b>Sonicator/Cell Disruption System</b>	Power Rating, 700 Watts, Programmable Timer, 72 Hours; adjustable Pulse On/Off for 1 Second to 24 Hours, full amplitude controlled from 1-100% ; 10 memories plus sequencing programmability for processing times, pulse on/off and amplitude can be saved to memory ; pulse mode with adjustable pulse on and off times; temperature monitoring with an optional temperature probe and overheat protection. multiple programs run in sequence, total energy output display both in watts and joules; auto tuning; overload protection; automatic fault detection and shutting down; touch screen/ lcd control. included with: Generator, Converter, 1/2" diameter probe with replaceable tip, power supply, Power cable, Converter cable, Wrench set, Integrated Sound Proof Chamber, Adjustable Height	01No.		



Sr#	Name of Items	Specifications	Qty	U Price	Total Price
		Sample Table, 1" diameter probe with replaceable tip (optional), Continuous flow Floccell (optional), Microtip probe (optional). Warranty with parts: At least One year preferably longer, Warranty will start from the date of installation.			
(2)	<b>Shaking Oil Bath/Water Bath</b>	Luminous digital LED display; No heaters, sensors or other fittings in the bath vessel; Interior & exterior stainless steel; Top covered with stainless steel cover, Temp Range 5-100 °C or better.; Temperature fluctuation 0.5 °C; Over temperature alarm protection, auto diagnostic system; Digital timer 1min to 99hr or better; Capacity 20 Liters; Warranty with parts: At least One year preferably longer, Warranty will start from the date of installation.	01No.		
(3)	<b>UV/VIS Spectrophotometer</b>	Wavelength Range and Accuracy, 190 - 1100nm $\pm$ 0.3 nm for entire range; $\pm$ 0.1 nm at D2 peak 656.1nm; Photometric Range, -4 to 4 A ; Photometric Accuracy, $\pm$ 0.002 Abs at 0.5 Abs; $\pm$ 0.004 Abs at 1.0 Abs; $\pm$ 0.006 Abs at 2.0 Abs; Photometric Noise, Less than $\pm$ 0.00005 A (at 700 nm) ; Photometric repeatability, Less than $\pm$ 0.0002A at 0.5 Abs; $\pm$ 0.0002A at 1 Abs; $\pm$ 0.001A at 2 Abs; Baseline Flatness, $\pm$ 0.0006 A (1100 to 190, one hour after light source turned ON); <b>Light Source:</b> ; Halogen lamp for Visible range; Deuterium Lamp for UV range, light source should be auto automatically selected as per wavelength required.; <b>Detector:</b> Silicon Photodiode dual detector/PMT; <b>Scan Ordinate Modes:</b> Absorbance, % Transmittance, % Reflectance; <b>Resolution:</b> 0.1nm or better; <b>Wavelength Range:</b> 185 –1100 nm; <b>Wavelength Accuracy:</b> $\pm$ 0.3nm or better for entire range; <b>Wavelength Repeatability:</b> $\pm$ 0.1nm or better; <b>Scanning Speed:</b> Selectable Variable wavelength scan rate 2nm/min to 3000 nm/min or better; <b>Spectral Bandwidth:</b> Variable (0.2/0.5/1/2/4 or	01No.		

Sr#	Name of Items	Specifications	Qty	U Price	Total Price
		5) nm; <b>Stray Light:</b> 0.02% (220 nm NaI) or better, 0.02% (340,370 nm NaNO <sub>2</sub> ) or better, 0.5% (198 nm KCI) or better.; <b>Noise:</b> less than 0.00005 Abs (700nm) or better; <b>Drift:</b> < 0.0005 A/hr (500 nm, 1-hour warm-up); <b>Baseline flatness:</b> ± 0.0005 Abs or better; <b>Integral accessories:</b> Compatible automatic online UPS, <b>3kVA</b> or better (Infosec, APC, Systek or equivalent).			
(4)	<b>Water Still</b>	Quality of water: Should deliver Type I/Ultra– pure as per International specifications as follows: Electrical Resistivity Min. 18.2 MΩ/cm @ 25°C ; Conductivity 0.055 μS/cm compensated to 25°C ; TOC level (system with UV lamp) 1 lit / min ; Bacteria 0.22μm) < 1 ; Chloride (ppb) < 1 ; Total Silica (ppb) < 3 ; Pyrogens < 0.001 Eu/ml; RNases free, < 1 pg/ml; DNases free, < 5 pg/ml; Storage: System should come with an inbuilt storage system of 5-8 L to store consistently high-quality pure water for prolonged period and prevent Contamination by ambient air.; Feed water: Should have separate feed water (Potable tap water) specific purification cartridge and application specific polishing cartridge; Consumable: Must Quote separately for consumables (cartridges, filters etc.) for ONE YEAR for trouble free working. Accessories: All cartridges, filters, pump or any such item which is /are essential for Installation and functioning /operating the equipment.;	01No.		
(5)	<b>Water Still</b>	Output: 4-5 Liters; Preferably Double Distillation stages; Conductivity (w/ Treated Water): 1.5 to 2μScm or better; pH : 5.5 to 6; Min. Pressure: 2-5 psi along with guage; Water supply: Minimum 0.5 - 2 Liter / min; Warranty with parts: At least One year preferably longer, Warranty will start from the date of installation.	01No.		

Sr#	Name of Items	Specifications	Qty	U Price	Total Price
(6)	<b>Deep Freezer</b>	Deep freezer vertical model with removable racks, Temperature range - 20C° or lower, at least size 18 Cubft, single door, supplied with 3000 watt stabilizer.	01No		
(7)	<b>Chromatography Column</b>	29219757 Cytiva Superdex 30 Increase Tricon 10/300 GL Prepacked SEC column Fisher cat no.15729140 or equivalent.	01No.		

  
**Dr. Naeem Rashid (CO-PI)**  
**School of Biological Sciences,**  
**University of the Punjab,**  
**New Campus, Lahore.**

### 1.2 Date of Submission & Opening:

Receipt of tenders: 04 August 2022 till 01:00pm  
 Opening Tender's 04 August 2022 at 02:30pm in School of Biological Sciences,  
 University of the Punjab, Lahore.

### 1.3 Particulars of Firms:

#### Name & Postal Address of Firm:

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Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Desg: \_\_\_\_\_

Tele No: \_\_\_\_\_ Fax No. \_\_\_\_\_

Cell No. \_\_\_\_\_

NTN: \_\_\_\_\_

Stamp: \_\_\_\_\_

GST: \_\_\_\_\_

E-mail: \_\_\_\_\_