MAHARSHI DAYANAND UNIVERSITY ROHTAK
DEPARTMENT OF GENETICS

TENDER NOTICE

Sealed tenders are invited subscribed as "Tender for Equipments" for supply of following instruments along with earnest money equal to 2% of the quoted rates on the total amount involved in the shape of Bank Draft along with a separate draft of Rs. 3000/- as tender fee (Non refundable) in favour of Finance Officer, M.D. University, Rohtak, so as to reach the **Head Department of Genetics on or before 27/12/2012 upto 5 PM.** The Tenders will be opened on 28/12/2012.
For details may visit university website www.mdurohtak.ac.in
Interested suppliers may have the list of items, detailed specifications and Terms & Conditions from the Department of Genetics on any working day **upto 5.00 p.m.** or from university website www.mdurohtak.com

REGISTRAR

Sr.No	Name of item	Specifications	Qty
1	HPLC	Detailed specifications are available at Annexure - 'A'	One
2	-86^0 C Deep Freezer	Detailed specifications are available at Annexure - 'A'	one
3.	Gradient PCR;	Detailed specifications are available at Annexure - 'A'	One
4.	2D Gel Electrophoresis	Detailed specifications are available at Annexure - 'A'	One
5.	GCMS	Detailed specifications are available at Annexure - 'A'	one

TERMS AND CONDITIONS GOVERNING THE TENDERS FOR THE SUPPLY OF EQUIPMENTS/ INSTRUMENTS.

1. Every tender shall be accompanied by the earnest money equal to 2% of the involved value. The earnest money should be deposited through Bank Draft along with a separate draft of Rs. 3000/- as tender fee (Non refundable) in favour of the Finance Officer, M. D. Rohtak, payable at the State Bank of India, Maharshi Dayanand University, Rohtak.
2. The tender received without earnest money or after the due date shall not be entertained except with the special approval of the competent authorities.
3. The supplies shall be executed within the time specified in the supply order which may be extended by the Registrar on other application of the supplier explaining reasons/circumstances due to which time limit could not be adhered to. In the event of the supplier failing to supply the material within time, he shall be liable to pay as compensation an amount equal to one percent or such small amount as the Registrar may decided on the said amount of the contract, for every day that the quantity remains incomplete,

provided that the entire amount of compensation shall not exceed 10 percent of the total amount of the contract. An appeal against these orders shall however lie with the Vice-Chancellor whose decision shall be final.

4. In case the contractor backs out of his contract, the earnest money deposited by him shall be forfeited besides any other action as may be considered necessary by the Vice-Chancellor.
5. All the charges including packing, forwarding and installation, taxes and other levies should be specified in the tender. The charges etc. not specified in the tender shall not be paid.
6. The quantity of material/supplies shall be subject to increase or decrease on the tendered rates. This increase or decrease shall be communicated by the University within 30 days of acceptance of the tender.
7. Supplies shall be made as per the schedule and within such time as is indicated in the supply order.
8. 100% payment will be made on receipt and inspection of goods to ensure the specifications and their good condition.
9. The rates accepted by the University shall be applicable up to 120 days and the supplier shall have to make supply during the period as and when required.
10. The tenders shall be opened by the Purchase Committee on **28.12.2012 at 11.30 a.m**. in the Department of Genetics, M.D. University, Rohtak in the presence of contractor/supplier and the Committee reserves the right for negotiation thereafter if considered necessary.
11. The Registrar reserves the right to reject or accept any offer without assigning any reasons.
12. All disputes subject to Rohtak jurisdiction.
13. Guarantee / warrantee of items must be mentioned.
14. **The University stands exempted from the payment of Central Excise Duty/Custom Duty. The rates be quoted keeping that fact in view. Necessary certificate will be provided by the University.**
15. No tender documents will be issued and rates are to be offered on company's' letter head.
16. If holiday occurs on the opening day, the tenders will be opened on the next working day.
17 The tenders not received in proper sealed cover shall not be considered and will be liable for rejection in a straightway.
18. **Rates for each item are to be quoted in a separate letter head and are to be sent in a separate cover**

Head
Department of Genetics
M. D. University, Rohtak

Annexure 'A'

High Performance Liquid Chromatography (HPLC) System

1) Solvent System (Binary):
   1. No. of Channels : 2
   2. Flow range : 0.001 to 10 ml/min in 0.001/min Increments
   3. Flow Precision : <0.07% RSTD.
   4. Flow Accuracy : ± 1%
   5. Pressure operating range : 8000 psi or better
   6. Gradient Composition Precision: <0.2 % SD
   7. Online degasser with max flow rate 10 ml/min

   Optional : Quaternary solvent system

2) Auto sampler:
   1. Sample capacity : 100 X 2 ml and/or above
   2. Injection Volume : 0.1 – 100 µl injection range in 0.1 µl
   3. Precision : 5 % RSD from 5-100 µl, < 1% RSD from 1-5 µl
   4. Carryover : < 0.05%
   5. Replicate injections : 1 – 99 from one vial

3) Column Heater/Cooler:
   1. 10°C above ambient to 60°C or better in 1°C increment.
   2. Column capacity : Should accommodate 2 column of 25 cm length or more
4) Operational Software:
   1. Original software with Single point control; of whole HPLC module
   2. Early maintenance feedback (EMF), electronic records of maintenance and errors should be available
5) Computer and printer:
   1. Intel Pentium Core 2 Duo E 7400 processor, 4 GB Ram, 1600 GB HDD, DVD Writer, 17" Monitor, Window XP Professional, SP2 OEM.
   2. HP Laser Jet Printer (upgraded)
6) The HPLC should have capacity to be used as an inlet for LC/MS-MS system of any make

   DAD Detector:
   1. Wavelength : 190-800nm or better
   2. No of Diode : 512 or more
   3. Light Source : D2 Lamp
   4. Short term Noise : $\pm 0.5 \times 10^{-5}$ AU at 230 nm
   5. Drift : 3.0×10^{-4} AU/h at 254 nm or better
   6. Linearity : >2 AU upper limits.

7. Safe leak handling must be provided together with the leak sensor
8. Peak purity software should be quoted

Optional: PDA Detector

7) Fraction collector:
    1. Fully Automated /computer controlled.
    2. Flow rates up to 5 ml/min or better
    3. Allows collection in 120 (90 mm X 10 mm) collection tubes with delay sensor
    4. Automated peak detection and collection, using an analog detector input of the LC system permits fully automated collection of only peak(s) of interest.
8) 3 KWA online UPS with 30 min back up to be provided with system.
9) Optional columns be provided with the system.
   Warranty for 3 years

Specification for -86 Deg C Deep Freezer, Double Door

1. Vertical Ultra low temp Freezer with two external doors (Independent lockable), with minimum 4 inner doors, moveable castor, Noise level less than 50 dB.
2. Capacity more than 450 liters with stainless Steel interior
3. Vacuum insulation panel (VIP) technology for excellent heat insulation and space saving.
4. Temperature range: -40 to -86 degree centigrade
5. Microprocessor controlled with LED Digital Display of Actual Temp., Set Temp., Ambient Temperature, Input Voltage, and Alarm Message etc.
6. Heavy duty two compressors 1 HP each (cascade), CFC free refrigerants and High efficiency condenser, Cascade cooling technology. Compresser warranty 5 years.
7. Excellent performance at high Ambient Temperature up to 32 deg.C
8. Audible and visual alarm System for high/Low temp, power failure & door opening and Filter Cleaning, Ambient Temperature variation, Sensor Error, Input Voltage Fluctuation Etc.
9. Built in vacuum relief port for easy recruitment after door opening.
10. Electric supply 220-240 volt 15 AMP.
11. PUF Insulation and triple point silicon gasket.
12. Password protection for unauthorized access.
13. CFC free cooling system with Non inflammable refrigerant.

Optional: CO2 back up complete system with CO2 filled cylinder

Supplied with: Racks with appropriate Boxes for Upright Freezer, Cryo Gloves and 5 KW UPS (online/offline).

Gradient PCR Specifications

1. The system is a 96 well Thermal Cycler with 6 separate peltier blocks to provide independent temperature zones to run – six different assays with varying annealing temperatures at the same time.
2. Each block to accommodate 16 wells and having the ability to set up PCR with a specific temperature differential of up to 5 degree centigrade between blocks.
3. Run up to 6 separate temperatures in the same plate with user defined time to determine the optimal annealing temperatures.
4. On board Tm calculator facility to approximate the optimal annealing temperature.
5. Temperature Accuracy ±0.25º C (35–99.9º C)
6. Block Average Heating/ cooling rate : 4 º C/sec
7. Temperature Range 4.0º C to 99.9º C
8. Temperature Uniformity <0.5º C
9. The system should have Standard and fast run modes in a single instrument with the ability to use 0.2ml PCR tubes or micro-well plates.
10. The system should support PCR volumes ranging from 10 to 80 microlitre.
11. Mouse or stylus free navigation capability with VGA colour touch screen allowing for easy intuitive graphical user interface programming.
12. Choice of saving the methods up to 800 to the instrument or unlimited to a USB memory stick.
13. Programmable heat lid cover from 50 degree to 105 degree centigrade for efficient PCR optimization.
14. Scalability: capability to interlink up to 11 PCR systems via single Ethernet hub.
15. Security: The system has the ability to store most important methods on a memory stick.
16. Portability: The system has a USB port to transfer methods from one machine to another.

17. The system can allow easy product updates via USB port.
18. The machine is duly certified / authorized for PCR process and the vendor should produce the certificate for the same.
19. All necessary optimized reagents and plastic ware for standard and fast thermal cycling should be available.
20. **Supplied with** Online UPS with 10-15 hours back up.

2D- Electrophoresis System

Complete 2D system which includes IEF for First dimension and Vertical System for second dimension with Power Pack

IEF 1st Dimention

Built-in 12,000 Volt/1.5 mA power supply for Isoelectric Focusing (IEF) Unit and Peltier thermostat cooling plate for heat transfer and electrode contact.

· Programmable instrument having RS 232C/USB interface for PC control
· Control of instrument through LAN
· Possibility of data acquisition
· On-screen protocol display with easy to read and edit options
· Working temperature of 18 - 25°C (+/- 1°C).
· Flexible first-dimension IEF which can be run up to six 24 cm IPG Strips
· Possibility of monitoring individual strips
· Reusable Sample cup capacity (up to 240 ul).
· Safety certification (CE Safety Certification - EN61010-1, UL61010-1, CSA22.2, 1010.1)

Vertical system 2nd Dimension for 2D Electrophoresis

· Maximum glass plate size of 18 x 24 cm, 18 X 16 cm or 18 X 8 cm.
· Dual Cooling Chambers for cooling.
· Capable of running up to four gels (maximum 112 samples at one time).
· Capable of running gels at constant temperature range (1- 45°C).
· Availability of multi range spacers.
· Maximum power setting of up to 1000V, 500mA, 50 W for working.
· Safety certification with approved international standards.

2D Software for Densitometry Analysis & Spot Counting

· Software for the analysis of post-electrophoretically Stained gels where the protein spots are compared between samples
· Synchronized zoom with intensity autoscale
· Automatic spot detection
· 3 x 10MB images in eight second Automatic spot matching
· Spot detection with user adjustable parameters
· Spot editing and filtering, Spot normalization
· pI and MW ladder calibration
· Protein list assignment of spots with known identity, pI and MW
· Data visualisation
· Supplied with USB dongle
· comparison between different gels should be possible

Warranty/Guarantee: For three years from the date of installation
Compatible online UPS

Specifications of Gas Chromatograph with Mass Spectrometer

A state of art Gas Chromatograph with Mass Spectrometer with following specifications.

Gas Chromatograph: Column Oven: The size of Column should be such that who can accommodate at least 2 columns at a time with temp. Upto 450 degree.

Ramp/Holds: 20/21 or more will be preferable.

Maximum Temp. ramp rate should not be less than 150 degree C/min.

Cool down rate should be best in its class.

Split Splittless Injector: Fully Electronic flow/pressure control with pressure range upto 150 p.s.i.

Maximum Temp. should be 450 degree with split range of 7,000:1

Auto Sampler: The system must have auto injection facility on two injection ports the same can be achieve by two auto injectors of minimum 21 vials or one auto injector of 21 vials with dual auto injection facility. For this vender must quote price of Auto Sampler separately as an option.

Mass Spectrometer: Scan Modes should be SIM, SCAN etc.

Electron Ionization mode.

Ion source must be made of inert material.

Source temp. must be from 100 degree to 340 degree.

Dual filaments facility with 200 micro ampere of filament current.

Electron energy should be adjustable from 0 to 150 V.

Mass Range should be upto 1200 amu.

Scan Rate must not be less than 14,000 amu/sec.

Mass axis stability: $<\pm 0.1$ Da over 48 hours

Transfer line temperature: up to 350 °C

Manifold temperature: 40-50 °C

Detector should be EMT or better.

Single/dual stage turbo molecular pump with minimum capacity of 400L/sec.

Performance Specifications: EI full scan: 1 pg OFN from m/z 50 to 300 for m/z 272 the S/N should not be less than 650:1.

Libraries: NIST & WILLEY

Computer: It should directly come from factory with preloaded software to avoid software problems at site. We will not accept PC from local sources.

Local Accessories: Required Gas Cylinders with regulators, Gas Purification Panel, Laser jet Printer, 1 Capillary Column, 2 Syringes & all other accessories required for operation of GCMS must be the part of main supply.

5 KW online UPS must be quoted.

3 years standard warranty

Consumable/spares cost for the operation of system for 3 years.