

**NAHEP****IDP- PROJECT**

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**INVITATION FOR QUOTATIONS FOR SUPPLY OF
GOODS UNDER NATIONAL SHOPPING PROCEDURES**

Letter No: 192/DUVASU-IDP/2021-22

Dated:-29-07-2021

Reference No: IN-DUVASU-MATHURA-188174-GO-RFQ

To

University Notice Board

Dear Sirs,

**Subject: INVITATION FOR QUOTATIONS FOR SUPPLY OF Hardware and Software for
Virtual Veterinary Skill Training Center**

1. You are invited to submit your most competitive quotation for the following goods:-

Brief description of the goods	Specification*	Quantity	Delivery period	Place of delivery	Installation required if any
Hardware & Software for Virtual Veterinary Skill Training Center	Hardware and Software for virtual veterinary skill training center Hardware and Software for UG teaching of Physiology - Annexure-1 and Pharmacology- Annexure-2 Detailed specification as per Annexure	02 Activities	One month from notification of award of contract	DUVASU , Mathura	YES

** Where ISI certification marked goods are available in market, procurement should generally be limited to goods with those or equivalent marking only.*

2. Government of India has received a credit from the International Bank for Reconstruction and Development (IBRD) in various currencies towards the cost of the National Agriculture Higher Educational Project (NAHEP) and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

- a) The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.
- b) All duties, taxes and other levies payable on the raw materials and components shall be included in the total price.

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- c) GST in connection with the sale shall be shown separately.
- d) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- e) The Prices shall be quoted in Indian Rupees only.
- f) All Quotation should be submitted with three years of AMC (One Year Warranty+2 years of AMC).
- g) The supplying firm should have a minimum turnover of three times of the values of good (as per the quotation) in the last three financial years which should be verified by a CA.
- h) Should possess GST/PAN/ITR of last three financial years.
- i) Experience of supplying the goods to Minimum two government organization (documentary support with order copies)
- j) Users list (duly Self attested and stamped)
- k) Certificate for non blacklisting on Rs.100/- Notarized Stamp paper
- l) The successful quotee should have to submit performance security equivalent to 10% of the order at the time of signing of contract.
- m) bidder must quote rate on prescribed Performa and it should be duly dated, signed and stamped by the bidder in absence of which the quotation may not be accepted and the decision of quotation evaluation committee shall be final in this regard.

3. Each bidder shall submit only one quotation.

4. **Validity of Quotation**

Quotation shall remain valid for a period not less than 15 days after the deadline date specified for submission.

5. **Evaluation of Quotations**

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

- a) are properly signed ;and
- b) Conform to the terms and conditions, and specifications.

The Quotations would be evaluated for all the items together.

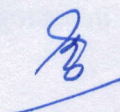
GST in connection with sale of goods shall not be taken into account in evaluation.

6. **Award of contract**

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

- a) Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
- b) The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

7. Part payment or part supply orders will not be accepted. The payment will be made immediately after delivery of Goods/Setup/installation/training/assignment/physical & Functional verified as per signed up/award of contract.
8. The necessary catalogue, leaflets, operational manual or any other printed material related to goods/material should be provided during completion of contract.
9. Normal commercial warranty/guarantee shall be applicable to the supplied goods.
10. The rates/prices should be FOR, DUVASU, Mathura (UP) India. All leakages-breakage and losses in transit including shortages, if any will be borne by the firm/supplier.
11. The firm should provide proof of GST registration no. / Tin no. / PAN no. and all legislative documents/Experience related documents required.
12. **Onsite installation and technical demonstration/training** should be provided by the supplier in consultation with expert team member of IDP, DUVASU, Mathura (UP).
13. In case, any holiday is declared by the Government on the day of opening, the bids will be opened on the next working day at the same time. The Principal Investigator, NAHEP – IDP, DUVASU, Mathura reserves the right to accept or reject any or all the bids.
14. The bids of firm (s) which have either been black-listed by DUVASU, Mathura or any other Govt. organization will not be accepted. In this regards, the firm has to give an undertaking on the enclosed format.
15. You are requested to provide your offer by registered/Speed post or deposit in the office of store purchase officer DUVASU Mathura latest by on or before 12-08-2021 up to 11:00 AM in the name of PI, NAHEP. The bids will be opened on same day at 03:00 PM in the office of undersigned. All suppliers/firms are requested to be present in the chamber of undersigned.
16. The firms interested in quotation should send separate quotation in sealed envelope. Each quotation should be placed in a separate envelope. No combined application will be entertained. The name of the item “**Hardware & Software for Virtual Veterinary Skill Training Center**” should be written on envelope in bold letters.
17. Write the title“ Quotation for supply of “**Hardware & Software for Virtual Veterinary Skill Training Center**” on top line of Envelope.
18. We look forward to receiving your quotation sand thank you for your interest in this project.



Principal Investigator
National Agriculture Higher education Project
IDP-PROJECT, DUVASU, MATHURA
Pin code: 281001, (U.P), INDIA

PRINCIPAL INVESTIGATOR
IDP-NAHEP
U.P. Pt. Deen Dayal Upadhyaya Pashu Chikitsa
Vigyan Vishwavidyalaya Evam-Go-Anusandhan Sansthan
MATHURA-281001

FORMAT OF QUOTATION *

Sl. No.	Description Goods	Specifications	Qty.	Unit	Quoted Unit Rate in Rs.	Total Amount	
						In Figures	In Words
1	Hardware & Software for Virtual Veterinary Skill Training Center	as per quotation document	02				
	TOTAL						
	Sales Tax						

Gross Total Cost :Rs.....

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs.(amount in figures) (Rs. amount in words) within the period specified in the Invitation for Quotations.

We also confirm that the normal commercial warrantee/guarantee ofmonths shall apply to the offered goods.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

* *Applicable while the bids are being invited for more than one item and would be evaluated for all the items together.*

Principal Investigator
IDP-NAHEP
U.S. Dept. of Justice
U.S. Attorney General
MATHURA-281001

The meeting of the faculty of department of Physiology was held on 04.06.2021 at 11.00 am in the department and following attended the meeting

1. Dr. A. K. Madan, Professor
2. Dr. Brijesh Yadav, Asstt. Professor
3. Dr. Mukul Anand, Asstt. Professor

The following specifications were finalized for setting up of Experimental Physiology Virtual laboratory under NAHEP, IDP for strengthening UG teaching

Specifications for setting up of Experimental Physiology Virtual laboratory:

1. **The hard ware** should be composed of Computers (At least i5 or above) with monitor (24 inch or above) and UPS with System Compatibility of Operating System (Windows 7 or above), Browser (Google Chrome) and RAM - 1 GB (Minimum) - 15 number.

2. **The Software: The license for a period of at least 5 years to use a software which:**
Should be registered cloud based version (Geo Indexed for 2.5 KM periphery of institute)
Should have Multi User Mode with examination Mode (At least 100 users at a time)
Support Team Interface and User Manual
Should support at least following experiments in virtual mode for students:

A. Experiments on heart (cardiovascular system)

- 1 Effect of electrical stimuli application, drugs and chemical mediators on cardiac activity.
- 2 Influence of cardiac output, peripheral resistance and vascular elasticity on arterial pressure.
- 4 Measurement of arterial tension by auscultatory method.
- 5 Influence of pressure, viscosity, radius & length of vessel on flow of liquid through vessel.

B. Experiments on skeletal muscles

- 1 Composed contraction of skeletal muscles and Simple contraction of skeletal muscles.
- 3 Role of motor end plate in initializing tiredness.
- 4 Action membrane potential, Resting membrane potential.

C. Experiments on GIT (digestive system)

- 1 Digestive system- Substrate specificity of salivary amylase.
- 2 Demonstration of action of pancreatic lipase in presence and absence of bile; Influence of pH on action of pepsin.

D. Experiments on isolated neuron

- 1 Effect of anesthetic substance and low temperature on excitability of nerve.
- 2 Determination of action potential velocity.

E. Experiments on Cerebral inhibition, Peripheral inhibition and Pfluger's law.

F. Experiments on kidney

- 1 Effect of hydrostatic pressure, osmotic pressure, diameter of glomerular afferent and efferent arterioles on urine flow.
- 2 Influence of aldosterone and antidiuretic hormone on urine flow.
- 3 Influence of glucose on urine flow.

G. Experiments on respiratory system

- 1 Pulmonary volumes and capacities and influence of radius of airways on them.
- 2 Influence of pleural space pressure on pulmonary ventilation.
- 3 Effect of surfactant on pulmonary ventilation.

H. Experiments on effect of Epinephrine, Norepinephrine, Acetylcholine, Isopreneline, Calcium Chloride, Potassium chloride, Propranolol, Atropine sulphate etc. on isolated frog's heart. (DRC- Dose response curve)

I. Experiments on effect of different drugs on dog BP & Heart Rate

- 1 Effect of epinephrine, acetylcholine, atropine on arterial pressure (Dog-Blood Pressure).
- 2 Simultaneous analysis of effect of different drugs on Dog Heart Rate and Blood Pressure.
3. Effects of drugs on blood pressure (Vasopressor and Vaso-depressor with appropriate blockers).

(Mukul Anand)
Asstt. Professor VPY

(Brijesh Yadav)
Asstt. Professor VPY

(A. K. Madan)
Professor VPY

[Signature]

Annexure-II

Specifications for setting up of Experimental Pharmacology Virtual laboratory

1. **The hard ware** should be composed of Computers (At least i5 or above) with monitor (24 inch or above) and UPS with System Compatibility of Operating System (Windows 7 or above), Browser (Google Chrome) and RAM - 1 GB (Minimum) - 06 number.
2. **The Software: The license for a period of at least 5 years to use a software which:**
Should be registered cloud based version (Geo Indexed for 2.5 KM periphery of institute)
Should have Multi User Mode with examination Mode (At least 100 users at a time)
Support Team Interface and User Manual
3. **Software Should support at least following experiments in virtual mode:**
 - i) Experiment on effects of various drugs (Mydriatic, Miotic and Local Anaesthetic) on rabbit's eye. For example, epinephrine, atropine, ephedrine, physostigmine, lignocaine etc.
 - ii) Evaluation of analgesic activity with the help of "Tail Flick Apparatus"
 - iii) Evaluation of analgesic activity with the help of "Hot Plate Apparatus"
 - iv) Writhing test to evaluate analgesic activity of a drug.
 - v) Study of Antihistaminic drugs/Anti allergic drugs by mast cell stabilization method with help of "Histamine Chamber"
 - vi) Study of Muscle Relaxant activity of a drug by "Rota-Rod Apparatus".
 - vii) Evaluation of CNS Depressants & Stimulants by "Actophotometer".
 - viii) Evaluation of anxiolytic activity of a drug using
 - a) Elevated Plus Maze Method
 - b) Pole Climbing Method
 - ix) Evaluation of anticonvulsant activity of drug using
 - a) Electro Convulsometer
 - b) Chemically (PTZ)-induced convulsions
 - x) Experiments to study effect of drug on pupillary reflexes
 - xi) Experiments on Legendorff's Apparatus
 - a) Effect of coronary vasodilators on isolated heart

- b) Effect of parasympathomimetics
- xii) Test for pyrogens using rabbits.
 - xiii) Effect of drugs on isolated guinea pig ileum (in-vitro).
 - xiv) To study respiratory depression effect on rabbit.
 - xv) Study of stereotype and anti-catatonic activity of drugs on mice.
 - xvi) Experiments on thyroid and antithyroid drugs
 - The effect of thyroxin, TSH, propylthiouracil, on metabolism.
 - xvii) Experiments on blood sugar
 - The effect of insulin (hypoglycemic activity) and alloxan on blood glucose.
 - xviii) Study of anti-inflammatory activity using carrageenan induced paw oedema method
 - xix) Study of diuretic activity using metabolic cage
 - xx) Experiment on Effect of various drugs on Isolated Frog's Heart. (DRC- Dose Response Curve) for example, Epinephrine, norepinephrine, isopreneline, calcium chloride, prapanolol, actylcholine, potassium chloride, atropine sulphate etc.
 - xxi) Experiment on Bioassay of Histamine on the Ileum of Guinea Pig.
 - xxii) To study the action of strychnine/ anaesthetic on frog neurons (excitability).
 - xxiii) Experiments on effect of different drugs on dog BP & heart rate.
 - xxiv) Bioassay of Acetylcholine on the isolated rectus abdominis muscle of frog
 - (a) By Matching Method, (b) By Interpolation Method, (c) By 3 Point Method, (d) By 4 Point Method.
 - xxv) Bioassay of oxytocin on the isolated rat uterine horn by following methods
 - (a) By Matching Method, (b) By Interpolation Method, (c) By 3 Point Method, (d) By 4 Point Method.
 - xxvi) Bioassay of serotonin on the isolated rat fundus strip by following methods
 - (a) By Matching Method, (b) By Interpolation Method, (c) By 3 Point Method, (d) By 4 Point Method.
 - xxvii) To record the DRC and to determine the PD2 value for acetylcholine on frog rectus abdominis muscle.

xxviii) Study of anti-ulcer activity - using pylorus ligation method.

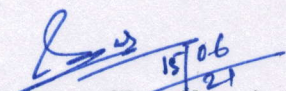
xxix) Evaluation of effect of acetylcholine (spasmogens) using rabbit jejunum

xxx) Evaluation of effect of different drugs on ciliary motility.

xxxi) Evaluation of effect of saline purgatives on frog intestine.

xxxii) Determination of acute irritation of a test substance.

- a) Skin irritation (Including edema formation)
- b) Eye irritation


(Soumen Choudhury)

Asst Professor & In-Charge
Dept of Pharmacology & Toxicology
COVSc & AH, DUVASU, Mathura