NAGALAND UNIVERSITY

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TENDER NOTICE

The manufacturers/authorized dealers for the equipment related to Biology are hereby invited to submit the sealed quotation for the following equipment under Department of Science and Technology (DST), Government of India, funded research project entitled- **"Insights on the impact of prenatal exposure to neurotoxicants on the onset of dopaminergic neurodegeneration and cognitive dysfunctions in *Drosophila* model: Development of dietary intervention strategies"** as per details given below within 15 days from the date of notification in the University website (http://nagalanduniversity.ac.in/).

Sl No.	Equipment/Item	Quantity
1	Fluorescent Stereozoom	1
2	Pipette set	1
3	PAGE Unit	1
4	Drosophila activity, eclosion, population monitor and accessories	1
5	Fly (Drosophila) Environmental Chamber	1
6	Microtome	1

Particulars of the equipment:

1. Fluorescent Stereozoom:

- The Microscope should have 10:1 zoom ratio with 8x-80x magnification range (1x objective, 10x eyepieces)
- The Microscope should come with Triple Beam with an exclusive fluorescence illumination beam path for homogeneously illuminated, reflex-free field of view and excellent signal to noise ratio
- The Microscope should have minimum Four positions fluorescence filter turret
- The Microscope should have Resolution up to 370 lp/mm or more (1x objective, 10x eyepieces), maximum resolution up to 740 lp/mm or more (2x objective, 10x eyepieces)
- The Microscope should have Click stop zoom settings to reproduce observation at specific magnifications
- The Microscope should come with Eyepiece 10x/23B with dioptre adjustable
- Trinocular tube 100% with Beam path switchable 100% camera or 100% eyepieces, with Inter pupillary distance 50-75mm or more, Observation angle 30°, suitable for High-end stereo microscopes, suitable Low viewing height
- The Microscope should come with Objective Plan 1.0x , Working distance 60 mm, 66 mm external diameter for ring light illumination or accessories
- The Microscope should come with Focus drive coarse/fine 410mm or more
- The Microscope should come with suitable for all incident and transmitted light bases. Focus drive coarse/fine 400mm or more & should have Suitable for all incident and transmitted light bases
- The Microscope should come with Transmitted Light Base with bight field and one sided dark field, should be designed for routine applications, and should come with sliding mirror for guiding light through the specimen at different angles. Tilting angle of the mirror is automatically set to the optimal angle, for quick and reliable contrasting of specimens, Illuminated object field diameter 50 mm. The stage should be Equipped with halogen illumination 20 W halogen reflector bulb and transformer 0-12 V/ 20VA, 100- 240 V. It should include transparent glass stage plate 165 x 200 mm or more. Stage should come with Day light conversation filter.
- The Fluorescence Lamp should be equipped with housing 106z, for reflected light, with centrable lamp mount for Hg 100W, with focusable 4-lens collector and heat protection filter, High pressure burner 103 W / 2 with longer service life
- The Microscope should come with Spotlight illumination, 2-arm Gooseneck with 500 mm length, with 2 Hi-Power LEDs, with minimum 5600K colour temperature.
- Fluorescence Filter set for DAPI should be quoted with an excitation filter 350/50 nm & emission filter 460/50 nm
- Filter set GFP should be quoted with an excitation filter 470/40 nm & emission filter 525/50m nm
    - Digital high-sensitivity monochrome camera with cooling architecture & ideally should be suited for fluorescence applications. Camera should have CCD sensor with 1.3 MPixel with a pixel size of 3,75 µm. Partial scan & various binning modes should be available, and external trigger capability for high-speed imaging should be available. Maximum frames per second (full frame) should be 31 fps at 1x1, 54 fps at 2x2, 72 at 3x3 fps & should feature 8,12, and 16 bit digitization. Advanced imaging tools like Image Averaging and High Dynamic Range acquisition should be provided for crisp and brilliant fluorescence images. Trigger cable should be quoted. Suitable C-Mount adapter should be quoted.

Optional Colour Camera:

- Digital Colour Camera should be quoted with CMOS sensor (1/2"), Image format 2048x1536 pixel, 3.1Mpixels, Fast live image 1024x768 with minimum 22 fps, Pixelsize 3.2µm x 3.2µm, Dynamic range >55dB / 600:1, Gain 1x - 4x, Single Firewire-B connector for data and power, Complete camera kit should include Software for camera control & suitable c-mount interface for cameras with 1/2" sensors

2. Pipette set:

Fully autoclavable research pipette:

Variable Pipette:

0.1-2.5 µl, 0.5 - 10 µl, 10-100 µl, 100 - 1000 µl (one each)

Fixed volume (single channel):

1,2,5,10 ul (one each)

3. PAGE UNIT:

Vertical Maxi Electrophoresis System with power supply high current

The System should be capable of casting and running 16 X16 cm gels using a Tape, Clip, petroleum gel Free based gel caster. It should be supplied with16cm glass plates, 1.5mm spacers (4), 15 well , Comb (2). Cell Includes central cooling core with gaskets, lower buffer chamber, Lid with cables, 2 set of glass plates, 4 sandwich clamps, upper buffer dam, casting stand with gaskets, leveling bubble. The system should be capable of connecting it with a water connection to maintain temperature. System should be supplied with an additional set of 0.5 mm & 0.75 mm spacers (4 qnty each)

Power supply specification :

Output specifications 250 V, 3.0 A, 300W
Output range (programmable) 5-250 V, fully adjustable in 1 V increments
0.01-3.0 A, fully adjustable in 0.01 A increments
1-300W, fully adjustable in 1W increments
Type of output Constant voltage, current, or power with automatic crossover
Output terminals 4 pair recessed banana jacks in parallel
Timer Up to 99 hr, 59 mm
Pause/resume function Yes

4. **Drosophila activity, eclosion, population monitor and accessories**:

Drosophila Activity Monitor (TriKinetics^{R}) along with accessories

5. <u>Fly (Drosophila) Environmental Chamber:</u>

Tender Specification
Programmable light intensity, maximum intensity should be at least 80 µmoles/m²/s of irradiance (at a distance of 15cm or more) from the lights.
At least four lights for uniform illumination in all four corners
Solid-state design controller. Temperature, lights and humidity must be independently controllable with 50 or more program storage
It should be possible to create complex environmental cycles by linking multiple programs.
Temperature range between 4-44°C with all lights on highest intensity. Temperature fluctuation no more than ± 0.5°C of the any set temperature. Auxiliary temp sensor to shut down the system in case of failure of primary temp sensor. Auto restart in case of power failure.
Inner volume of at least 0.8 m³.
At least five shelves which should be epoxy coated steel wire shelving. Door lock. Castor for movement. Power points inside the chamber,
Shelves should be vertically adjustable at step size of 0.5 inches or less.
Extra humidification capable of maintaining higher than ambient humidity to 85% with all lights on.
Refrigeration coil should be phenol-coated. Hot Gas Bypass system for cooling and heating
CFC Free Insulation. Good service support. Users list and performance certificate from Drosophila labs in India. ISO certified service provider,
At least one access port on the incubator wall for external electrical cables. Observation window with cover.
The unit should be compact. This means that the ration of inner volume (measure in cu.cm) to the footprint area (measure in sq cm) should be > 110. Here footprint area is defined as the area occupied by the unit on the floor (i.e. the outer length x breadth).
Warranty: at least One year warranty. Optional UPS of 6KVA to be quoted (one hour battery support)

6. <u>Microtome:</u>

- Should have Section thickness setting range 0.5–60 µm
- Section thickness selection
  from 0.5–2 µm in 0.5 µm-steps
  from 2–10 µm in 1 µm-steps
  from 10–20 µm in 2 µm-steps
  from 20–60 µm in 5 µm-steps
- Total horizontal specimen feed 25 mm
- Vertical specimen stroke 59 mm
- Specimen retraction ON/OFF
- Specimen orientation: XY – 8°
- Should have two steps mechanical trimming function for fast and convenient specimen trimming
  Trimming thickness 10 µm, 50 µm

- Width 438 mm 17.24”
- Height 265 mm 10.43”
- Working height (knife edge) 105 mm 4.134”
- Weight (without accessories) 29 kg 63.9lbs
- Accessories should include disposable blades pack of 50 blades high profile, disposable blade holder for low profile or high profile blade.
- Should have effortless manual sectioning via a counter-balanced, exceptionally smooth-running hand wheel.
- Should have Hand wheel lockable in any position via brake lever attached to base plate and, in addition, lockable in upper position via hand wheel grip
- Should have CE certificate
- Should have more than 30 installation in eastern region in which 15 should be in reputed Government institution.
- Consumables like Disposable HP blades 50 per pack.
- Should have factory trained engineer support for service.

General information:

1. All prices mentioned should be at- Department of Zoology, Nagaland University, Lumami 798627 Nagaland.
2. We shall provide DSIR certificate.
3. Warranty: Minimum one year with spares
4. **For imported equipment, a copy of <u>Air Way Bill must be submitted</u>**
5. A compliance sheet with respect to our specification and your quote should be included while submitting the tender. All technical specification claims should be printed in the technical brochure of the instrument.

Y. Sarat Chandra

(Dr. Sarat Chandra Yenisetti)

Principal Investigator