

**Open tender notification for the procurement of “Micromanipulator and Microinjector” at the Indian Institute of Science, Bangalore**

**(Last date of submission of tenders: 30<sup>th</sup>-September-2021)  
(TENDER FROM DOMESTIC VENDORS)**

Date: 31.08.2021

To whom it may concern

This is a Request For Quote (RFQ) from domestic (India based) manufacturers for the supply of “**Micromanipulator and Microinjector**” including a mount to enable mounting the manipulator on an inverted fluorescence microscope body, as a part of a tender for the Department of Microbiology and Cell Biology at the Indian Institute of Science.

1. Quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
2. The quotations should be on FOR-IISc Bangalore basis in INR only.
3. Please send your quotation valid for 90 days for the supply of equipment described below.
4. Your quotation should clearly indicate the terms and conditions of the quotations, delivery, delivery schedule, entry tax, payment terms, warranty coverage etc.
5. The tender should be submitted in two separate sealed envelopes – one containing the “Technical bid” and other containing the “Commercial bid”, both of which should be duly signed and must reach the undersigned on or before 17:00 hours 30<sup>th</sup>-September-2021
6. The compliance table should include all the items and in the same order. The first column should describe your compliance in a “Yes” or “No” response. If “No” the second column should state the extent of deviation. The “third” column should state the reasons for the deviation if any. The fourth column can be used to compare your solution with that of your competitors or provide details as requested in the technical requirements table below.

**A. Micromanipulator** An user friendly, ergonomic with direct transmission ability system should be offered with all necessary accessories and complete system integration of hardware and software components for ideal integration and functionality. The vendor should be responsible for the complete system installation, functioning and maintenance.

**Required specifications:**

1. The system should be a fully electronic system. All X, Y, Z axis movements are controlled electronically.
2. All three axis movements at all speed control should be controlled with one single integrated joystick. The system should have the coarse, fine, extra-fine movement selections using a single upright joystick.

3. The system should have resolution of more than 0.02  $\mu\text{m}$  (20 nm) increment for fine and smooth movement.
4. The system should have maximum travelling distance of 20mm in all three axis. i.e. 10mm towards left and 10mm towards right from center point and to cover the working area may be petty dish or slide format.
5. The system should have a joystick for dynamic movement: the speed of the capillary is increased by the degree of joystick deflection.
6. The system should be capable of aligning the capillary at from 0 degrees upto 90 degrees for completely side-on injections.
7. The system should have a tool travel speed of at least 10,000  $\mu\text{m/s}$ , for rapid work and penetration of tough material.
8. The system should have option to set both upper & lower programmable Z axis limits for effective injection.
9. The system should have position save option, at least 2 positions which can act as a search plane for the easy searching of cells.
10. The system should have an automated function for the capillary to move out of working radius and return to the precise same spot, called "home" (For easy capillary replacement) and "Clean" (To clean the debris) functions.
11. The system should be able to connect to an electronic microinjector to carry out semi-automated axial injection where penetration of cell and dispensing of sample is performed automatically.
12. The system should have an option to connect to a piezo device and the piezo impulses can be supported by adjustable automated forward movements.
13. The manipulator should not have handedness and it should be possible to mount it on either side of any Microscope.

## **B. Technical Specifications for Microinjector**

### **Required specifications:**

1. Featuring a wide range of functionality, simple operation and built-in compressor or additional cylinder with regulator to independently deliver the required pressure.
2. Ideal for applications Pronuclear or cytoplasmic injection of RNA/DNA solutions into fertilized oocytes of animals/insects.
3. Injection volumes range from femtoliters to microliters
4. Programmable injection ensures reproducibility.
7. User-friendly interface with large LCD for easy operation.

8. System should be optimized user interface for various applications.
9. The electronic microinjector should have programmable parameters like injection time, injection pressure, compensation pressure.
10. Should have both injection pressure and compensation pressure range between 5 – 6000hpa.
11. System should have clean function and the rinsing pressure range 6000hpa.
12. System should have Injection time range between 0.10s – 99.99s.
13. The electronic microinjector should be compatible and integrates with any micromanipulator systems for semi-automatic injection and optional foot paddle to trigger manual injection.
14. Should supply the appropriate sterile injection capillary and sample loading tips.
15. Should supply the universal stand or microscope adaptor to mount the micromanipulator.

**Terms and conditions:**

- 1) The quotations should be submitted in two bids system; i.e., Technical bid, and Commercial bid.
- a) The technical bid must include all details of technical specifications of the instrument along with commercial terms and conditions masking only the price component. Bill of materials, brochures, technical datasheets, and any other document may be enclosed to help the evaluation of the technical bid. Please also include warranty terms and any other information on upgradation terms in the technical bid.
- b) The commercial bid must include the price of the instrument in Indian currency (INR) indicating break up of:
  - I. For goods:
    - i. Installation, commissioning and training charges, including any incidental expenses, if any.
    - ii. Agency commission charges, if any.
    - iii. Provide certificates for country origin of manufacturing for each line item
  - II. Price of every line item in the commercial bid should be quoted along with the total quoted price for the instrument to be operational (fixed and ready to use) in our facility

- c) Both the Technical and Commercial bid should be put in separate sealed envelopes, and put together in another cover stating “automated nucleic acid extraction and liquid handling robot” and should reach us on or before 17:00 hours 20<sup>th</sup>-August-2021
- 2) The vendor should have a good track record of having previously supplied at least 10 same automated nucleic acid extraction and liquid handling robot systems in India in last two years (please furnish details)
- 3) The vendor should have team of dedicated engineers for application and service support based out of Bangalore
- 4) The lead time for the delivery of the equipment should not be more than three months from the date of receipt of purchase order
- 5) The validity period of the quotation should be 90 days
- 6) Import code of the items should be indicated
- 7) If the goods are found to be defective, they have to be replaced or rectified at the cost of the supplier within 30 days from the date of receipt of written communication from us. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.
- 8) The purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time period to award of construct without thereby incurring any liability of the affected bidder or bidders
- 9) Please submit the proposal to the following address: The Chair, Department of Microbiology and Cell Biology, Indian Institute of Science, C. V. Raman Avenue, Bangalore 560012.