जवाहरलाल नेहरू उन्नत वैज्ञानिक अनुसंधान केंद्र

(विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार की स्वायत्त - मान्यता प्राप्त विश्वविद्यालय)

JAWAHARLAL NEHRU CENTRE FOR ADVANCED SCIENTIFIC RESEARCH

(An Autonomous Institution under Department of Science & Technology, Govt. of India - A Deemed University)

जक्कूर पोस्ट, बेंगलूरु 560 064, कर्नाटका ,भारत / Jakkur P.O., Bengaluru - 560 064. Karnataka, INDIA

JNC/PUR/WT-DBT/K.Bansal/4623/20-21/55/E

December 10, 2020

NOTICE INVITING TENDER

Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur invites sealed tenders in two bids (Technical & Commercial) from qualified and experienced Vendors for **1 No. of Refrigerated Centrifuge, 1 No. of Refrigerated Micro centrifuge and 1 No. of CO2 incubator** as per the terms and conditions below and as broad specifications shown in **ANNEXURE-I**

TERMS & CONDITIONS:

1. Any item not specifically mentioned in the technical specification but essential for successful implementation of the system (in the opinion of the bidder) must be brought to our notice and quoted accordingly.

2. At the time of installation, if it is found that some additional items are required to meet the operational requirement of the configuration, but not included in the bidder's original list of deliverables, the bidder shall supply such items to ensure completeness of the configuration at no extra cost.

3. Delivery period should be 8 weeks from the date of Purchase Order. Once delivered to onsite, the installation, commissioning and acceptance period will be within two weeks from the date of delivery of equipment.

4. The successful bidder immediately after the award of the Purchase Order shall prepare a detailed plan of installation as proposed to be followed by placement of the equipment, etc.

5. System Installation and integration of all supplied equipment and software shall be done by the successful bidder. Subcontracting in any form is not allowed.

6. Bidders should clearly specify after sales/service/application support/AMC capabilities. Bid validity should be 60 days.

7. Warranty and support: All supplied Equipment with Accessories – 3 years.

8. Provide all information as regards pre-installation requirements (i.e. room, environment) for system installation.

9. Detailed list of users of the system in India with contact details to be furnished.

10. Bidders should be submitted EMD for Rs. 35,000/- only in the form of DD/ Bank Guarantee respectively. EMD exemption will be allowed to vendors having valid MSME Certificate as per rules.

11. Performance Security: The successful bidder has to provide 10% Performance Security in the form of Bank Guarantee within 15 days after receiving Purchase Order. (The same PS will be treated as PBG). Letter of Credit will be established only after receipt of mandatory 10% Performance Security in advance.

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12. Performance Bank Guarantee: Successful bidder has to submit 10% PBG valid for three years.

13. Payment terms: 100% Irrevocable Letter of Credit. 90% payment will be affected against documents through bank, balance 10% after installation & acceptance, commissioning and submission of Performance Bank Guarantee for 10% of Purchase Order value valid for three years from the date of installation/commissioning. For local supplies, payment terms are 30 days from the date of supply / acceptance and submission of Performance Bank Guarantee for 10% of Purchase Order value valid for three years from the date of installation/commissioning.

14. EMD will be returned on receipt of Performance Security.

15. Late & delayed quotations will not be considered.

16. As time is the essence of the contract, delivery period mentioned in the Purchase Order should be strictly adhered to. Otherwise the successful bidder will forfeit Security Deposit. Of the supplier fails to supply, install and commission the system as per specifications mentioned in the Purchase Order within the due date, the supplier is liable to pay liquidated damage of 0.5% of Purchase Order value per every week of delay subject to a maximum of ten percent beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier. JNCASR reserves the right to cancel the Purchase Order in case the delay is more than ten weeks. Penalties, if any, will be deducted from the Security Deposit. The maximum amount of penalty shall be ten percent. Liquidated damages shall be levied on the Purchase Order value, freight, insurance and duties.

17. The place of Applicable Law / Jurisdiction is Bengaluru, Karnataka, India.

18. Decision of the President, JNCASR will be final.

19. **Shipping Terms:** Price quoted should be on FCA basis for imported items.

20. **Goods & Service Tax:** Please note that JNCASR is eligible for GST Concession under 45/2017 notification and IGST under 47/2017 notification, will issue a certificate to this effect. The prices can be quoted either in foreign denominations or in INR. Exchange rates as on the date of price bid opening will be taken into account for comparison purpose.

21. **Custom Duty:** Please note that JNCASR is eligible for customs duty exemption under 51/96 notification and will issue a certificate to this effect. C.D. Nil at present.

22. **Formats for price-bid:** Corresponding to each part in the technical bid there should be a pricing referring to the Part name in the technical bid and mentioning quantity, unit price and total price. If there are any other charges, they should be also added at the end. All pages have to be serially numbered. References if any to technical bid should be provided along with the exact location (page number, etc). You are required to use the price bid format given by us only for commercial tender.

23. **Warranty Replacements:** Any replacement of defective items during Warranty period is the responsibility of the successful bidder. The expenditure involved like freight charges, customs duty, insurance charges, clearance charges etc. are to be borne by the successful bidder.

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24. **Submission of Proposal:** The proposal should be submitted in a sealed two bid system. One containing sealed technical bid and the other one a sealed price bid. The bidder name, the nature of the envelope (either technical bid or price bid) must be clearly mentioned on top of each of the envelope. The sealed proposals must be addressed to Senior Stores & Purchase Officer, JNCASR. The proposals should be submitted at the Stores & Purchase Department, JNCASR.

25. **Evaluation of bids:** Technical bids will be evaluated by JNCASR. Price bids of technically qualified bidders only will be opened on date and time that will be decided by the JNCASR.

26. Public Procurement (preference to **"Make in India") order** 2017 will be considered as per order No. P-45021/2/2017-PP (BE-II), dated 28.05.2018.

IMPORTANT DATES		
Last date for submission of bids (Two-bid system) (a) Technical Cover : Technical Specs. Commercial Terms and Conditions, Brochures, Compliance statement EMD & Bill of quantities without Price Information. (b) Price bid cover: With complete specs & item wise Rates to be indicated.		**December 28, 2020 up to 3.00 PM**
Opening of technical bids : Opening of commercial bids :		**December 28, 2020 at 4.00 PM** **Will be informed later**
EMD		Rs. 35,000/- (Rupees Thirty Five Thousand Only) drawn in favour of, The President, Jawaharlal Nehru Centre for Advanced Scientific Research, inform of DD or Bank Guarantee.

(K. Bhaskara Rao)
Sr. Stores & Purchase Office

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Annexure-1

Specifications for Cell Culture Infrastructure

Refrigerated Centrifuge for Cell Culture

1. Refrigerated multipurpose bench-top centrifuge with 4 liters capacity.
2. Should be capable of using fixed angle and swing out rotors with adapter to use different tube formats.
3. Temperature range should be from –11°C to 40°C.
4. System should have a maximum Capacity of swing out rotor of 4 x 1000 mL, 4 x 5 MTP and fixed angle 6 x 250 mL bottle.
5. Maximum speed: Fixed angle rotors- 14,000 rpm and RCF 22,132 x g force, for Swing out rotors- 4,500 rpm and RCF 4,347x g force.
6. System should have user-friendly operation; key panel with provision to set speed RPM/RCF, radius correction values that can be changed during centrifugation.
7. Should have fast temperature function for rapid cooling of centrifuge and stand-by cooling options.
8. Should have programmable temperature function to allow automatic precooling based on pre-programmable time and date.
9. Should have a minimum 5 direct recall program keys for routine programs and capability of storing up to 99 programs.
10. Should have excellent temperature control with compressor running continuously during the run time.
11. The centrifuge must have a timer function to support the sample pre-incubation.
12. Should indicate "time since centrifugation complete" after completion of centrifugation run.
13. Should have a rotor option with universal bucket and adapters to hold three different formats of vessels (Tubes, Plates and Bottles) without needing to change the adapters.
14. The centrifuge must be equipped with automatic rotor recognition and imbalance detection for maximum operational safety.
15. Timer setting – 10 s to 99 h 59 min, with continuous run function. Should have a separate short spin function key with user defined speed.
16. Should have 10 acceleration and 10 deceleration ramps to prevent and protect sensitive samples.
17. Noise level at max speed should be less than 56 dB(A) for quite operation in work place.
18. Should have automatic shut off function to reduce energy consumption and to extend compressor life when not in use for long hours.
19. Centrifuge lid with soft-touch lid closure, and low opening height for stress-free lid locking.
20. System should have smallest footprint.
21. Automatic Imbalance detection and cut–off.
22. Centrifuge lid should possess two gas springs to support the lid securely when opened.
23. Fixed angle rotors and rotor lids should be made of metallic and must be fully autoclavable at 121 °C.
24. Swing bucket rotors must be made of metallic and all the buckets, adapter and caps must be fully autoclavable at 121 °C.

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25. Should have extended display function to show both set and current parameter settings.
26. The centrifuge must have an USB-port for service maintenance and software upgradation.
27. Should have emergency door lock release (in case of power failure).
28. Features in the quotations should be substantiated with proper company catalogue/brochure/manual.
29. Should supply necessary accessories like 15 and 50ml conical tubes along with the rotor.
30. The centrifuge must be European CE Certified.
31. At least three years warranty.

Rotor, adapters and caps to be quoted:

1. High capacity swing out rotor of 4 x 1000 mL with Universal bucket to fit tubes / bottles / plates using universal adapter with maximum of 4,500 rpm and 4,347x g. Should be able to accommodate following tubes: 68 x 5ml/15 mL conical tubes, 184 x 5ml FACS tubes, 36 x 50 mL conical tubes, 4 x 250 mL bottle and 4 x MTP/DWP. Appropriate adapters should be quoted for these tubes / bottles / plates.
2. Aerosol-tight caps for all adapters for safe centrifugation of hazardous samples.

Microcentrifuge Refrigerated

1. Maximum speed should be at least 21,300× g (15,060 rpm), with a brushless motor.
2. Temperature range should be from -10°C to 40°C and should be able to maintain 4°C at maximum speed.
3. System with keypad control panel will be preferred.
4. System should have bright digital display with LCD only.
5. System should have timer settings from 10 sec to 9:59 hrs, with continuous run function
6. Instrument should come standard with an aerosol tight rotor to accommodate at least 24 number of 1.5/2ml tubes. It should be possible to operate the rotor even without lid.
7. Centrifuge should have lid with soft-touch lid closure.
8. It should have emergency door lock release (in case of power failure).
9. Instrument should have an in-built condensate drain to prevent water accumulation.
10. It should be possible to perform a fast pre-cooling of the instrument using a dedicated Fast Temp function.
11. Speed setting should be possible in both rpm and rcf.
12. Should possess a separate short spin key for brief spin.
13. Should have key lock function to prevent accidental change in the set parameters.
14. It should be possible to program compressor shut off after non-usage of the centrifuge.
15. Should have the flexibility to accommodate rotors for different formats of tubes starting from 0.2ml PCR tubes up to spin column tubes.
16. Rotor lids should have a Quick Lock system with only ¼ of a turn for secure lid closing and opening. Aerosol tightness of rotor should be certified by a third party agency.
17. Rotor and lid both should be metallic and should withstand autoclaving at 121°C.
18. It should be possible to perform gentle acceleration and deceleration using dedicated key.

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19. Noise levels should be <56 db even when operated without rotor lid.
20. It should be possible to operate the centrifuge at set rpm, for short spin protocols.
21. Centrifuge must have an USB-port for service maintenance.
22. Instrument should be CE Certified and also have a IVD Conformity.
23. Should be supplied with at least 2,500 DNA LoBind 1.5ml microfuge tubes.
24. Instrument should be provided with at least three years of warranty.

Rotor to be quoted:

1. Fixed angle rotor for minimum 24 x 1.5 / 2.0 mL tubes with metallic aerosol tight Quick Lock close with only ¼ of a turn, with maximum speed of at least 14,000 rpm and 20,800x g.

CO2 Incubator

1. Stackable CO2 incubator with at least 165 - 200L of internal capacity.
2. Temperature management; 4ºC above ambient to 50ºC with control increment of 0.1ºC, Temperature stability at 37 ºC + 0.1ºC, Temperature uniformity of + 0.3ºC at 37 ºC.
3. Temperature uniformity of the chamber should be according to German DIN 12880 norm.
4. CO2 gas range should be at least 0.1 – 20% with control increment of 0.1%, Accuracy + 0.3% at the specified RH at 37ºC and ambient 22ºC.
5. Stability of + 0.1% at 37ºC and ambient 22 ºC.
6. Gas uniformity of + 0.1% at 37 ºC and ambient 22ºC across the chamber.
7. CO2 recovery: Should attain 5% CO2 without overshoot within 5min after door opening and closing event.
8. Should have High-Temperature Disinfection [HTD] of 140 ºC for 2 hours. Entire HTD cycle including the time for warming up and cooling down to incubation temperature (37 ºC) should not take more than 12 hours.
9. Should have large display to transfer data via USB interface.
10. The input gas pressure required should be 0.1 MPa (1 bar, 14.4 psi); operational gas pressure requirement range should be 0.05 -0.15 MPa (0.5 – 1.5 bar, 7.2 -21.8 psi). The gas tubing should have inner diameter of 6.5 mm and outer diameter of 10 mm.
11. The system should have BMS relays built in and option to incorporate onto data monitoring and documentations modules.
12. Should have flexibility to have right or left door opening option. Hinges, associated cable and other accessories should be robust and stringently tested.
13. High quality door gasket should maintain a leak-free seal.
14. Should have separate single inner glass door for monitoring of samples without disturbing conditions of the chamber.
15. The Inner chamber should be formed from single stainless-steel sheet with deep-drawn, seamless design with no corners, welds or joints for higher capacity and ease of cleaning.
16. Should have six-sided direct heating elements to ensure even distribution of heat throughout the chamber with four independent temperature sensors.
17. Should come with a removable humidity tray for easy cleaning and refilling of distilled water with dedicated independent heater.

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18. Should be "fan less" design to reduce chance of contamination, reduce noise level, minimum air turbulence, bigger usable capacity and reduction of recurring cost associated with periodic HEPA filter replacements.
19. Should have state of the art Dual Channel Non-Drift Infra-Red (NDIR) type CO2 sensor with auto-calibration feature to ensure accuracy of sensor automatically and capacity to withstand at least 140 °C during high temperature disinfection.
20. Should have two Access ports; each of 25 mm dia. at the back of the chamber to allow for external probes, etc., for monitoring of chamber conditions by using third party instruments.
21. The incubator should come with standard 4 perforated stainless-steel shelves with 4 position shelving rack and option to upgrade to 8 shelves; thickness of each shelf should be 1.5 mm with flatness tolerance of individual shelves of 1 mm or lesser.
22. Should be supplied with 96 well and 12 well plates (between 50-100 plates each) for culturing primary cells.
23. Instrument should be provided with at least three years of warranty.

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