THE UNIVERSITY OF BURDWAN

Rajbati, Burdwan- 713104

Date: 11. 10. 2017

Sealed Quotations are invited within 31.10.2017 from reputed supplier/manufacturer for purchase of the following laboratory items under CSIR, New Delhi, No. 27(0322)/17/EMR-II dated 12.04.2017. The Principal investigator of the project is Dr. Somasri Dam, Assistant Professor, Department of Microbiology, The University of Burdwan, Golapbag, Burdwan-713104.

Terms & conditions:

1. The Equipment's suppliers/ Manufacturers must provide at least 2 years warranty and/ or satisfactory, cashless after installation.
2. Quotations for foreign purchase must give details of all requirements, terms & conditions and others (Price should include freight and transfer to the Department of Microbiology, The University of Burdwan, Golapbag, Burdwan-713104 and should be quoted in INR). Price should be always directed for CIF Kolkata.
3. Suppliers/manufacturers, who will provide extra items (Small Equipments necessary for Microbiology/Molecular biology Laboratory, Voltage stabilizers, UPS, chemicals etc as per need of the laboratory will be preferred. But in any case quality and specifications for each of the items will not be violated.
4. The authority reserves the right to decide purchase of a particular make among different submitted quotations on the basis of the lowest quoted price and the quality on a general basis or the recommendation of the user and the purchase committee. The PI may not buy all products listed and the total order value may vary according to the requirement. Vendors will be directed to supply this material in different times within this financial year (2017-2018). Suppliers providing extra benefit for bulk/combo offer may mention in the quotation.
5. Only final price (considering discount cost & GST/any other tax cost) should be quoted. All the quotations with suitable specifications must reach to the PI, the above mentioned address within stipulated time limit.

Purchase of following equipments Ref No: CSIR/2017-2020/MICRO/SDAM/Equipments-1

1. Class II, Type A2 Biological Safety Cabinet
2. Refrigerated Table Top Centrifuge
3. Semi-dry Blotting Apparatus along with suitable Power Pack

Technical Specifications:

Class II, Type A2 Biological Safety Cabinet (Make-ESCO/ Thermo Scientific/ Klenzaids)

1. The Bio safety cabinet should be Type A2 in which 70% Air should be re- circulated and 30% of the air should be exhausted.
2. The Bio Safety Cabinet must include two DC motors. High power consuming AC motors should not be used.
3. The motor must automatically adjust the airflow speed without the use of a damper to ensure continuous safe working conditions, even without maintenance adjustments.
4. In order to preserve safety to the user and the environment, the exhaust blower on the cabinet must continue operating when the supply blower stops working. If the exhaust blower should fail, the supply filter will also be turned off.
5. In order to ensure consistent and reliable down flow velocity across the supply HEPA filter over the life of the cabinet, the cabinet must use a pressure sensor (rather than anemometer) to detect pressure drop across the supply filter, rather than in just one point across the down flow. The pressure sensor must be encased in order to protect the sensor from temperature, humidity and other environmental phenomena that can impact the sensor's performance.
6. The microprocessor must display the inflow and down flow air velocities in real-time on an LED display to ensure the user knows whether or not the cabinet is working under safe operating conditions.
7. The front window must be a 10" sash opening and be made of laminated safety glass to ensure containment of potentially hazardous samples in the case of accidental glass breakage.

8. All interior and exterior parts must be painted or smooth to ensure no risk of cuts to users or maintenance personnel.
9. The front of the cabinet must be angled 10º to help minimize glare on the window to the user, and to ensure that the user's posture is comfortable during a working session. Inadequate user ergonomics in a safety cabinet may lead to excessive fatigue, unsafe working habits and harmful consequences to user safety or product contamination.
10. The cabinet noise level must be less than 63 dB(A) for a 4 foot cabinet as measured in a sound proof room 12 inches in front of the cabinet and 15 inches above the work surface. Lower noise levels promote more comfortable and safer working habits of the user.
11. The Biosafety Cabinet should have microprocessor controller and same must be located on a slanted front panel so it is easy to see and reach from a seated working position in front of the cabinet.
12. The interior of the front window must be accessible for cleaning without requiring the user remove or support the window.
13. The biological safety cabinet must be capable of achieving current state-of-the-art in energy efficiency. A biological safety cabinet with lights on and fan at operating speed should consume less than 200 watts for a nominal four foot width and have a reduced energy mode for non-operational maintenance on containment in the work area.
14. The cabinet must automatically reduce fan/blower motor speed to 30% when the front window sash is in closed position to ensure reduced energy consumption when the cabinet is not is use.
15. In order to provide maximum effectiveness, efficiency and safety to laboratory Personnel, UV light must be programmable to allow for specific exposure times from 0 to 24 hours. The automatic shut off feature on the UV light saves money on replacement of the bulbs.
16. The Cabinet should have provision to fit taps for Vacuum, Water and Non Combustible Gas. Taps should be quoted as optional items.
17. The Bio safety Cabinet should be NSF certified with listing on NSF website. Each cabinet should have individual sticker of NSF Certification.
18. The Bio safety cabinet should incorporate HEPA filter of the class H 14 EN 1822 and having minimum efficiency of 99.995% at 0.3 µm particle size.

19. Approximate Dimension Exterior 1500 H x 1300 W x 800 D; Interior 800 H x 1200 W x 500 D
20. Ventilation System Exhaust and Inflow air volume approx 300-350 CFM
21. Heat Emissions at 25ºC should be approx 0.2 KW or lesser.
22. The Bidders should provide details of Standard Warranty available
23. The cabinet Should be provided with Microprocessor controller and large LED display for inflow and Down flow air velocity and hours of operation, Audible and visual Alarms for HEPA filter failure, blower failure, airflow speed failure, Incorrect window position.
24. The BSC must incorporate an LED Indicator to indicate filter loading and should provide visual and audible alarm to indicate excessive HEPA filters loading which can result in unsafe airflows deviation from the NSF recommended inflow and down flows air velocity values measured in meters per second or foot per minute.
25. The cabinet should be provided with fixed / adjustable Height Stand, UV Light and one set of detachable arms rest and one / two electrical outlet.
26. The Drain Pan of the BSC should be made of Stainless Steel. The drain pan should not be painted or power coated.
27. The Bio safety cabinet should have dual side wall with negatively pressurized interstitial space. Bio Safety Cabinet with single glass side walls should not be quoted.
28. To enable the Bio-Safety Cabinet to work under clean and controlled temperature environment
29. A 2 Ton Air Conditioner (Split) from reputed company should be provided with the Bio-Safety Cabinet for smooth working of the instrument.
30. Should be supplied with one no suitable Stabilizer.

Refrigerated Table Top Centrifuge (Make-Heraeus / Thermo Scientific/ Sorvall/ Hermle/ Eppendorf)

1. The centrifuge must offer swinging bucket, fixed angle and microplate rotors to meet current and future sample processing needs of the lab

2. Temperature range: -10°C to 40°C , Time range 99 Hours, 59 minutes plus continuous operation
3. Rotor should have auto locking system. Rotor shall be installed and removed with no tools in less than 5 seconds
4. CE marked, IVD compliant, UL listed- for safety containment
5. System should be Microprocessor controlled and should have Direct, brushless induction drive
6. Centrifuge must be supplied with Swinging Bucket Rotor, 90°, Rmax 144 mm. Max Speed (rpm) - 4,500 / Max RCF (x g) - 3,260. Rotor Capacity 4 x 145 ml. To be supplied with 50 mL Conical Buckets (8 X 50ml) and adapter for 15 mL Conical Tube (8 X 15 ml).
7. Centrifuge must be supplied with fixed angle rotor 6 x 50 ml conical tubes in biocontainment certified angle rotor, 9,500 rpm, 12,100 xg, Angle of the rotor 45°, Rmax 120mm, with adapter for 15 ml conical tube
8. Centrifuge must be supplied with fixed angle 24 x 2 Rotor, 45°, Rmax 85 mm. Rotor Capacity (places x volume, mL)- 24 x 1.5/2; Speed (rpm) - 17,850. Max RCF (x g) - 30,279.
9. The buckets and rotor sealing lids must be certified for bio-containment by a 3rd party lab of worldwide recognition.
10. Bucket lids must operate in a safe manner without spring clips or metal components.
11. Should be supplied with one no. of 1 KVA online UPS.

Semi-dry Blotting Apparatus along with suitable power pack (Make-Atto/Biorad)

1. 2-4 mini gels should be accomodated
2. Supplied with filter paper and membrane for at least 20 transfer

Purchase of following laboratory items Ref No: CSIR/2017-2020/MICRO/SDAM/Chemicals1

Serial No.	Product Name	Amount	Quantity	Manufacturer/ Cat. No.
1	NdeI	4,000 units (20,000 unit/ml)	1	NEB (R0111S)
2	SalI-HF	2,000 units	1	NEB

		(20,000 units/ml)		(R3138S)
3	KpnI-HF	4,000 units (20,000 units/ml)	1	NEB (R3142S)
4	EcoRI-HF	10,000 units (20,000 units/ml)	1	NEB (R3101S)
5	XhoI	5,000 units (20,000 units/ml)	1	NEB (R0146S)
6	T4 DNA ligase	20,000 units (400,000 units/ml)	1	NEB (M0202S)
7	Plasmid Isolation Kit	50 preps	2	Qiagen (27104), ThermoFisher Scientific (K0502)
8	Gel Extraction Kit	50 preps	2	Qiagen (28704), ThermoFisher Scientific (K0691)
9	cDNA Synthesis Kit		1	Qiagen (205111), ThermoFisher Scientific (K1621), Invitrogen (11-754-050), NEB (E6300S)
10	RNA Isolation Kit	50 preps	1	Qiagen (74104), ThermoFisher Scientific (12183018A)
11	RNase A (DNase, Protease free)	10 mg	1	ThermoFisher Scientific (EN0531)
12	BD BBL™ Biosate Peptone	454 g	2	BD Biosciences (211862), Fisher Scientific (B11862)
13	CELLSTAR® Standard Cell Culture Flasks (50 ml, 25 cm^2)	red standard screw cap, clear, cellstar® tc, sterile, 10 pcs./bag	200 ps	Greiner Bio-One (690160)
14	Propidium iodide	1.0 mg/mL Solution in Water	1	ThermoFisher Scientific/Molecular Probes (P3566), Sigma-Aldrich (P4864-10ML)
15	DAPI (Sigma)	10 mg	1	ThermoFisher Scientific/Molecular Probes (D1306), Sigma-Aldrich (10236276001)
16	Glutathione agarose	10 ml	1	ThermoFischer/Pierce/Sigma/MPBio
17	Reduced glutathione			ThermoFischer/Pierce/Sigma/MPBio
18	Mouse monoclonal anti-HA 12CA5		1	Roche/ Sigma/Invitrogen

19	Rabbit polyclonal anti HA		1	Sigma (H6908)/Invitrogen
20	GAM-HRP	1 vial	1	Sigma/Invitrogen
21	GAM Alexa Flour 488		1	Sigma/Invitrogen
22	GAR-TRITC		1	Sigma/Invitrogen
23	ECL kit			Sigma/ ThermoFischer
24	Proteinase K		1	Sigma/ ThermoFische/MPBio
25	G418(Geneticin)	1 g	1	ThermoFisher Scientific (11811023) Sigma (A1720-1G)
26	Zymolase/Lyticase		1	Sigma L2524-10KU/ ThermoFischer/ Himedia/ Any
27	G418(Geneticin)	1 g	1	ThermoFisher Scientific (11811023) Sigma (A1720-1G)
28	PMSF Protease Inhibitor	5 g/10g	1	Sigma (10837091001)/ ThermoFisher Scientific(36978)
29	Formaldehyde	500 ml	1	Sigma (F8775)/ MPBio (0219404790)
30	Ni-NTA agarose beads	10 ml	1	ThermoFisher Scientific (R90101)
31	BSA	12 mg (20 mg/ml)	1	NEB (B9000S)
32	DMSO	500 ml	1	MPBio (0219605590)/ Sigma (D8418)
33	HycloneAdult Bovine Serum	500 ml	2	Thermo Scientific (SH30075.03)
34	Nunclon Delta tube flat w/screw cap	75ps/bag	450 ps	Thermo Scientific (156758)

Outsourcing of following customized research services Ref No: CSIR/2017-2020/MICRO/SDAM/service1

Serial No.	Product Name	Amount	Quantity	Manufacturer/ Cat. No.
1	Polyclonal antibody production (crude antisera). Protein will be provided (purified and lyophilised or in acrylamide gel)	1	~20 ml	Any
2	Synthesis of cDNA pool from			Any

	E. histolytica cells and subsequent amplification of specific gene of interest			

Dr. Somasri Dam
Assistant Professor
Department of Microbiology
University of Burdwan
Golapbag, Burdwan
West Bengal-713104
E-mail: dam_somasri@rediffmail.com; me123441@gmail.com; Ph: 8697146797