INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032

FORMAT OF TENDER

NIT No:IACS/SAIS/2026-27/41 **Date: 04.11.2026**

Sealed tender in two bids system (technical bid and price bid) is invited from bonaid, resourceful and eligible manufacturer/exclusive distributor/vendors for **Electrophysiology (EP) System/Instrument and Animal behavior monitoring tracking & Analysis system:**

Part-I (Technical Bid) of the tender should contain technical specifications in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price, if needed, as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelop, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the **office** of **School of Applied & Interdisciplinary Sciences (SAIS), Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

Tender Notice No.	**NIT No: IACS/SAIS/2026-27/41** **Date: 04.11.2026**
Last date and time of submitting tender	25/11/2026; Time 2.00 pm
Date, time and venue of Pre-bid meeting to discuss technical specification*	Online meeting on 12/11/2026
Date, time and venue of opening technical bid of the tender	2nd December 2026, at 3 pm in Room No. M147
Date, time and venue of opening the price bid of the tender	3rd December 2026 at 3 pm in Room No. M147
Contact	Email: ocss5@iacs.res.in Tel: +91 33 2473 4971 (Ext: 1400)

*If you wish to participate in the online Pre-bid meeting, please write a mail to the email account (ocss5@iacs.res.in) on behalf of your company so that the required link can be sent prior to the online meeting.

The technical bids will be opened first to judge/evaluate the technical specifications of the said instrument and thereafter the price bids of only technically qualified bidders will be opened.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Opening of price-bid: The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly super scribed as 'TECHNICAL BID' on the outer cover of the envelop as already detailed above.

Item 01: Technical Specifications for Electrophysiology (EP) System/Instrument

- Hardware system should be sixteen channels and can be used for both animal and human.
- Ethernet/ High Speed USB Data Acquisition with analysis Software.
- ADC resolution of minimum sixteen bits or more with variable sampling speed and gain ranges.
- Ethernet-ready data acquisition and analysis unit can record multiple channels with differing sample rates; record at speeds up to 100 kHz per channel and 1,600 KHz aggregate.
- Same sixteen channel hardware system should support to measure wired and wireless parameters.
- Analog inputs channels should be sixteen with absolute maximum Input: ±15 V and operational Input Voltage: ±10 V
- A/D Resolution should be sixteen bits with accuracy (% of FSR): ± 0.0008 (approx.) and input impedance of 1.0 MΩ
- Analog outputs channels should be two with output voltage Range of ±10 V and D/A resolution of sixteen sixteen bits, accuracy (% of FSR): ± 0.0008 (approx.).
- Output drive current should be ±5 mA (max) with output impedance of 100 Ω.
- Digital I/O channels should be sixteen with voltage levels TTL, CMOS and external trigger input is TTL, CMOS compatible.
- The same sixteen channel hardware system should have the inbuilt feature to store the recorded data to cloud for future access.
- An electrocardiogram amplifier should come with the same sixteen channel hardware system to measure raw electrocardiogram signal, heart rate, R-R interval and heart rate variabilities.
- Maximum sample rate should be 100 K samples/sec per channel with internal buffer: ~42 M samples and waveform output buffer: ~4.2 M samples
- Power requirements: 12 VDC @ 2.5 amp (uses AC150A) with operating temperature range 0-70° C and operating humidity range of 0-95% (non-condensing)
- The electrocardiogram amplifier should have the inbuilt facility to switch between normal ECG output and R-wave detection.
- The R-wave mode should output a smoothed pulse with the occurrence of each R-wave and the exact timing of the R-wave is detected even under conditions of extreme signal artifact.
- The amplifier should also include a user-switchable baseline stabilizer.
- One quantity of alligator tooth-based electrode and two pcs of spring type electrodes, monopolar needle electrodes one pcs, bipolar needle electrodes two pcs should be supplied along with electrode extension cable with same sixteen channel hardware unit will be used to record electrocardiogram from small animals.

- Pulse and pressure cable for existing non-invasive animal tail blood pressure unit compatible with same sixteen channel hardware system should be supplied.
- Electrocardiogram amplifier should have gain variation of 500, 1000, 2000, 5000 with output selection knob for normal mode or R-wave mode.
- Output Range should be ±10 V (analog) with frequency response maximum bandwidth of (.05 Hz – 150 Hz)
- Amplifier should have inbuilt knob to select Low Pass Filter-35 Hz, 150 Hz and High Pass Filter-0.05 Hz, 1.0 Hz
- It should have notch filter of 50 dB rejection @ 50 Hz or 60 Hz with noise voltage of 0.1 µV rms – (0.05-35 Hz)
- Same sixteen channel hardware system should support to measure other animal parameters like, EMG, EEG, invasive blood pressure, organ bath, non-invasive cardiac output etc.
- User friendly software for recording, analyzing and printing the data, the software should allow calibration of transducers, display of actual values, controllable gain, filter settings, baseline, settings for event marking and annotation.
- It should display data in scope mode and chart mode and allow calculation of rate, period, frequency, min, max, count, integral, derivatives from raw channels.
- Software should allow the export of raw data in txt, .mat, .wav, .abf, .pxp, .edf formats
- It should be capable of measuring time interval between user selectable points. Display of data value at user selected point and editing of the records and re-annotation.
- Software should have option to integrated video camera for subject monitoring during the recording with analysis feature of detect and classify heartbeats, locate animal ECG complex boundaries.
- It should have various automatic analysis features for ECG, HRV, spike histogram, video capture, epoch analysis.
- Should support cloud study management application for data management and storage.
- Should have enhanced stimulator control for hardware unit that allows independent triggering of stimulator output—no longer limited to triggering with start of acquisition.
- Software should open/import “MAT-file” binary format and reconstruct the graph with appropriate sampling rate, channel labels, units, and data.
- Warranty should be for three years.
- Installation and Demonstration of the equipment and necessary training on site free of cost as and when it is required.
- Company should be able to provide telephonic or online support whenever required.
- The Quoted model must have a reference for installation within last 5 years. Bidders/OEM may submit PO copies of the same model quoted for references.
- A Kolkata-based service and application support center should be available.

Item 02: Technical Specifications for Animal behavior monitoring tracking & Analysis system

S.N.	Specifications
	The software should have the following features
1	Video Camera based activity monitoring system for small animal (mice and rat) for the assessment of memory, anxiety, depression and other types of behavior of the animal.
2	The behavior tracking software protocol should have the following options for selection like video source, apparatus, zones, ports, sequences, keys, switches, test settings & options, fields, stages, events & actions, calculations, analysis and result, report and data.
3	The software should have the facility to create password protected individual id and password which is an inbuilt feature of the software to comply with GLP and the saved data should also be password protected.
	Computerized video tracking software with perpetual license, one usb cmos camera, one Lense, one cable 16 feet, one morris water maze 5 feet diameter, and one camera stand compatible with camera for the evaluation of different conditions like anxiety, mental, depression, memory learning from small animal in experimental condition with live tracking of animal head, body and tail in real time or prerecorded video file.
4	Should generate report in graph, text, excel spread sheet, track plotting with making point of start, end point, immobility period and freezing episode marking and occupancy plotting (heat map) for center, head and body with immobility and freezing episode concentration count.
5	The tracking software should run at least ten years without any updating charges after the activation of the software license key. The activation key should not have any expiry.
6	Software should have the ability to track the animal's head, center and tail and can also covered the animal with color with animal movement orientation during animal behavior tracking.
7	It should have the facility for sequence setting to detect specific transitions of the animal apparatus and also have the facility to identify specific location in the apparatus.
8	Software should be meant for recorder video files analysis, for recording of animal activity, events, social interaction and global activity with running of independent tests.
9	It should have the capacity to add or delete animals and option to amend the experiment setup during experimental without disturbing the protocol setup and without help of any dongle/authenticated key all experiment and experimented data should be secure with the help of individual's id and password which is an integrated part of the software.
	Should generate a report in graph, text, excel spread sheet, track and occupancy plotting (heat map) for center, head and body separately with immobility and freezing episode count and also produce the value of standard deviations.
10	System should automatically score over hundred different parameters like total distance absolute turn angle, total distance travelled by animal's head and animal body clock wise
11	All experimental files and individual user id should be protected with individual user id and password without using any authentication USB type key or dongle.
12	System should automatically score over hundred different parameters like total distance absolute turn angle, total distance travelled by animal's head, animal body clock wise and anti-clockwise rotation, visited zone list, no of rearing episode, grooming of the animal and Overall: distance, speed, direction, Zones: Latency to enter, time in, distance from.

	Mobility: Latencies, time mobile, mobile bouts, Sequences: Rotations, visit to zone in an order. Behaviors: Counts, durations, frequencies.
	The software should be meant for advanced image analysis, for recording of activity, trajectories, inbuilt creation of user id and password to protect individual recording files, events, social interactions, and global activity with running of independent tests in up to fourteen apparatus simultaneously.
	It should have the facility for sequence setting to detect specific transitions of the animal with in the apparatus and also have the facility to identify specific location in the apparatus.
11	Evidence of research publications (at least 5) in SCI/SCIE indexed journals with impact factor >5 using the video tracking software

Technical compliance chart should be provided following format,

Sr. No	Tender specification	Your offered instrument specification	Extent of compliance

Tender will not be accepted if the technical compliance chart is not provided following the above format.

2. PRICE BID

The financial bid indicating (item-wise, if required) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly superscribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and the corresponding manufacturer/exclusive distributor/vendors will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

PRICE: Price to be quoted on INR (The Indian Rupee).

3. BID SECURITY: Declaration in terms of F.9/4/2020-PPD dated 12.11.2020

a. An Account payee Demand Draft/Pay Order for Rs. 13000.00 (Thirteen thousand only) drawn in favor of "Indian Association for the Cultivation of Science (State Bank of India, Jadavpur University Branch, A/C No. 11079699211, IFSC: SBIN0000093, MICR Code: 700002048)" is to be furnished by the bidders except those who are registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department. Bid Security money or Earnest Money Deposit (EMD) may also be deposited in Bank Guarantee or any other acceptable form.

b. The Demand Draft for the Bid-Security should have at least 90 (ninety) days validity period from the date of opening of the bids.

c. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

4. PERFORMANCE SECURITY:

- An Account **Payee Demand Draft of Rs. 65000** of the order value in the name of "Indian Association for the Cultivation of Science" is to be furnished by the successful bidder as Performance security. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money or EMD will be refunded to successful bidder on receipt of the Performance security money.

GENERAL INSTRUCTIONS

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening of the tender shall be lapsed by mutual consent.

2. The tender should accompany a compliance chart.

3. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.

4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally to visit the website (www.iacs.res.in/tender) for any amendment.

5. 100% payment after delivery or 90% after delivery in case of LC.

6. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.

7. Service facility: In India, preferably Kolkata, supplier should mention their details of service setup and man powers who are responsible for after sales support. Response time should be within 24 hrs.

8. The model number, make and a printed literature of the product should be submitted positively.

9. Proposed delivery schedule should be mentioned clearly. Delivery of the materials to the PI should be within 60 days from the date of purchase order.

10. Manufacturers / exclusive distributors / vendors should have history of supplying this type of instruments to this or other scientific organizations. Availability of a list in this regard would be preferred.

11. Authorized dealership certificate should be provided in case of principal manufacturing company is not quoting directly.

12. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.

13. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.

14. In case of any dispute, the decision of IACS authority shall be final and bidding on the bidders.

15. For any clarification regarding technical specifications, information etc., please send your queries to Professor Surajit Sinha (ocss5@iacs.res.in).

16. The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

17. The OEM should have a service center of its own in East for more than 5-10 Years.

Registrar