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CSIR-IIIM

सीएसआईआर-भारतीय समवेत औषध संस्थान

CSIR-INDIAN INSTITUTE OF INTEGRATIVE MEDICINE

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**EXPRESSION OF INTEREST (EOI)**  
**FOR**  
**SUPPLY INSTALLATION TESTING AND COMMISSIONING OF**  
**500 MHz NMR SPECTROMETER WITH AUTO SAMPLER**

**EOI No. 06(07)/2025/EOI**

**Dated: 03.07.2025**

## **About the Organization**

CSIR-Indian Institute of Integrative Medicine, Jammu established in 1941, is a constituent laboratory of Council of Scientific and Industrial Research (CSIR), New Delhi, with its expertise in Natural Product driven drug discovery. It provides solutions to challenges faced by Industry, Government Departments and Entrepreneurs through basic and applied research and process development. It is internationally recognized for its contributions to biotechnology research and is an ideal place for taking ideas to commercialization through state of the art research and development in the area of fermentation technology.

CSIR-Indian Institute of Integrative Medicine, during its yesteryears journey, has made its mark as a dynamic, innovative and result oriented R&D Organization. The clientele spans all corners of the world. In India, CSIR-IIIM is one of the oldest National laboratories and the reliable destination of Natural product chemistry and biotech Industries.

CSIR-Indian Institute of Integrative Medicine has several projects in hand, carried out in-house or in collaborative mode with premier academic and research institutions in the country and abroad.

With the above background, An Expression of Interest (EOI) is initiated at CSIR-IIIM with the prospective manufacturers, their authorized channel partners or agents/ Suppliers and system integrators to discuss with the Technical committees on the aspects of utility, technology, feature, literature, design, technical parameters, clientele and other related issues of the equipment and material for the following equipment to be procured for CSIR-IIIM, Jammu.

<b>S.No</b>	<b>File / Ref.No.</b>	<b>Item Description</b>
01	06(07)/2025/EOI	Supply, Installation, Testing and Commissioning of 500 MHz NMR Spectrometer with Auto Sampler.

## INSTRUCTION TO TENDERERS

### **Invitation for Expression of Interest**

1. The Director, Indian Institute of Integrative medicine (IIIM), Canal Road, Jammu Tawi 180001 hereby invites expression of interest from manufacturer, their distributors and Indian agents of foreign principals, if any for ***Supply, Installation, Testing and Commissioning of 500 MHz NMR Spectrometer with Auto Sampler.***
2. The bidding document can be downloaded free of cost directly from Central Public Procurement Portal (CPPP) of government of India website <http://etenders.gov.in/eprocure/app> and CSIR-IIIM Website [www.iiim.res.in](http://www.iiim.res.in)
3. Only those bidders are eligible to participate in this expression of interest who have two or more installation in India in which at least one should be in CSIR/IIT/ICAR/ICMR like govt. Research Institution.
4. Schedule for Submission: EOI proposal complete in all aspect with the copies of the required documents may please be submitted online through CPP Portal of Govt. of India, Website <http://etenders.gov.in/eprocure/app> The prospective bidders should adhere to due dates specified Tender Details corresponding to this Tender. The schedule for submission of proposals and opening of proposals is as follows:

Sl. No	Stage	Date & Time
1.	Publish Date & Time	03-07-2025 06.00 PM
2.	Sale/document Download Start Date & Time	03-07-2025 06.00 PM
3.	Clarification End date	10.07.2025 06.00 PM
4.	Proposals Submission Start Date & time	03-07-2025 06.00 PM
5.	Proposals Submission End Date & Time	23-07-2025 3.00 PM
6.	Proposals Opening Date & Time	24-07-2025 03.00 PM

5. All prospective bidders are requested to kindly submit their queries, if any to the address indicated above so as to reach the office Stores and Purchase Officer, CSIR- Indian Institute of Integrative Medicine, Canal Road Jammu-180001 latest by **10.07.2025**
6. Presentation by bidders is schedule for **29.07.2025 at 2:30 PM onwards**, Venue is **Board Room, CSIR-IIIM, Jammu**. Interested bidders are requested to send email to [purchase@iiim.ac.in](mailto:purchase@iiim.ac.in) confirming their willingness for making their presentation, on or before **10.07.2025**.

7. The bidders representatives who will make the presentation should possess all the technical details of the machinery, its capacity, complete information on the company, previous experience, various technologies involved, service centres available in India and financial capabilities to execute project. The representative should be capable enough to answer all queries of the Technical Sub-Committee. (TSC).
8. The Technical Sub-Committee shall finalize the specifications after knowing / obtaining details about relevant/available technology in the market suiting to the requirement and R&D needs of our Laboratory.
9. For evaluating the responses, CSIR-IIIM may call for further presentations of their case in person or presentation can be considered via video conferencing also.
10. The director IIIM Jammu reserved the right to accept or reject any for all EOI/tenders/offers or withdraw the notice at any stage of processing without assigning any reason whatsoever, such an event would not cause obligation of any kind to CSIR-IIIM.

Sd/-  
Stores & Purchase Officer  
(For and On behalf of The Council of  
Scientific & Industrial Research)  
0191-2585032. [purchase@iiim.ac.in](mailto:purchase@iiim.ac.in)

**1. Introduction:**

CSIR-IIIM is planning to procure a **500 MHz NMR Spectrometer with Auto Sampler (Quantity 01)** for R&D activities of the Institute.

**2. Objective:**

The objective of this EOI is to receive complete technical proposals, detailed specifications of various machinery/process involved, study drawings, study plan, layouts, understand various technologies, understand bidders capabilities to execute such supplies and then finalize specifications, list of machinery/items etc and also set eligibility criteria for bidders etc.

**3. Scope of Supply:**

Details about specific R&D application needs and general requirements of the instrument are provided below. However, the exact detailed technical requirements and specifications will be finalized in discussion with the expert committee.

Tentative basic technical specifications are given below.

**Technical specifications for 500 MHz NMR SPECTROMETER**

<b>1. Magnet and Container</b>	<ul style="list-style-type: none"><li>➤ Latest technology shielded magnet 11.7 Tesla with 54 mm bore superconducting magnet for 500 MHz</li><li>➤ Anti-vibration platform to damp the frequencies above 14 Hz to get neat spectra should be quoted as part of the system.</li><li>➤ Drift rate: <math>\leq 5</math> Hz</li><li>➤ Helium hold time should be at least 220 days or more with auto level monitoring and recording.</li><li>➤ Liquid nitrogen hold-time for at least 15 days.</li><li>➤ One set of Liquid Nitrogen and Liquid Helium transfer Line should be provided</li><li>➤ Digital matrix shims with at least 20 Room Temperature shims for excellent line-shape</li></ul>
<b>2. Electronics and Console</b>	<ul style="list-style-type: none"><li>➤ <b>Radiofrequency (RF) Generator:</b> Two independent channels to handle nuclei such as <math>^1\text{H}</math>, <math>^{13}\text{C}</math>, <math>^{15}\text{N}</math>, <math>^{19}\text{F}</math>, <math>^{31}\text{P}</math> and <math>^{109}\text{Ag}</math> etc. capable of performing multidimensional NMR experiments. High performance power transmitters with High band (<math>^1\text{H}/^{19}\text{F}</math>) amplifier (100 watts or more) and a low (or Broad) band (X) amplifier (500 watts or more).</li><li>➤ Gradient experiments such as Pulsed Field Gradient experiments with higher gradient strength (40 Gauss/cm or more), faster shimming should be the capability of the machine. Frequency generation, digital receiver controls</li></ul>

	<p>with over sampling and digital filters should be quoted appropriately.</p> <ul style="list-style-type: none"> <li>➤ Provisions for setting frequencies and field to lock and Digital-Auto Lock providing higher stability. System should achieve locking of the sample with different combination of solvents in a short duration without manual interference.</li> <li>➤ Auto shimming feature for solution. Gradient unit for Auto shimming to achieve good line shape of sample and to perform all new gradient pulse program based experiment with capability to run DOSY and other gradient experiments having capacity of 40 G/cm or better with 10 Amp external gradient.</li> <li>➤ Automatic Tuning and Matching for the nuclei under study for liquid samples.</li> <li>➤ Variable Temperature Unit with required accessories to perform variable temperature experiments to be done in the range +150°C to -100°C with <math>\pm 0.1^\circ\text{C}</math> variations or more comprehensive range should be provided. Controller should be able to sustain temperature stability for both high and low ranges up to a longer period of time.</li> <li>➤ High bandwidth receiver system with digital quadrature detection</li> <li>➤ 16 Bit Analog to Digital Converter or better to be quoted</li> </ul>
<p><b>3. Probes</b></p>	<p><b>Probe for Liquid Samples</b></p> <ul style="list-style-type: none"> <li>➤ High resolution 5 mm variable temperature 500 MHz solution state probe compatible with the magnet system. It should be equipped with single axis Z-gradient coils for execution of gradient spectroscopy, gradient shimming generation of pulsed field gradient (PGF) of desired shape, high quality PFG based solvent suppression, coherence selection and DOSY experiments etc. (kindly specify the maximum gradient strength that can be generated on the probe). Probe should be capable of covering nuclei range <math>^1\text{H}</math>, <math>^{19}\text{F}</math>, <math>^{31}\text{P}</math> to <math>^{15}\text{N}</math>, <math>^{39}\text{K}</math> and <math>^{109}\text{Ag}</math> with computer controlled automatic tuning and matching (ATM)</li> <li>➤ Appropriate amplifiers and RF sources should be quoted in the electronics section to match this probe. The minimum operational temperature range for the probe should be -100°C to +150 °C or better and it should include all consumables, accessories and controllers for low and high temperature operations.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ <i>The following should be specified and supporting specification sheet along with one representative spectrum with parameter details that has been recorded on this type of probe should be included in the quote: <sup>1</sup>H Sensitivity 800:1 or better; <sup>19</sup>F sensitivity 700:1 or better; <sup>13</sup>C sensitivity 300:1 or better; <sup>31</sup>P sensitivity 150:1 or better and <sup>15</sup>N sensitivity 40:1 or better.</i></li> </ul>
<b>4. Auto-sampler</b>	<ul style="list-style-type: none"> <li>➤ An automatic sample handling system with capacity of loading at least 60 samples from front of the magnet at the user level. Equal number of spinners and additional 10 numbers. If variable temperature experiments require different spinners, 5 number of low temperature and 5 number of high temperature spinners should be additionally provided. The NMR data acquisition software should have control for the auto sampler.</li> </ul>
<b>5. Variable temperature unit having</b>	<ul style="list-style-type: none"> <li>➤ Temperature range capability: Minus (-)100°C to Plus(+)150°C.</li> <li>➤ High resolution / accuracy / stability of temperature setting (at least +/- 0.1°C).</li> <li>➤ Accessories for running experiments below ambient temperature.</li> </ul>
<b>6. Hardware and Software Requirements</b>	<ul style="list-style-type: none"> <li>➤ One High performance Latest configuration computer (PC) system or workstation for controlling NMR data acquisition and One High performance Latest computer (PC) for processing.</li> <li>➤ There should be at least 2TB storage in the computer/ workstation.</li> <li>➤ Software for multi-dimensional NMR data collection and processing for liquids samples</li> <li>➤ NMR Software for acquisition and processing of 1D and 2D data.</li> <li>➤ NMR software for processing the FID file in PC/Laptop.</li> <li>➤ Two software licenses for structure confirmation</li> <li>➤ Onsite/OEM site training of two persons for operation and maintenance should be given during the installation.</li> <li>➤ Standard set of samples for both liquid probe to calibrate the instrument with tool kit.</li> </ul>
<b>7. Initial supply of cryogen for installation</b>	<ul style="list-style-type: none"> <li>➤ The pro-installation and installation visit should be made by competent engineers at the site of installation at no extra cost to CSIR-IIIM. Vendors have to arrange for all the cryogenics of liquid nitrogen and liquid helium and related accessories required for charging and installation</li> </ul>

	<p>of the magnet o. In case of magnet-quench during the installation or at subsequent times due to any technical reason or failure, the supply (including transport) of the liquid helium till the magnet is restored to normalcy is the responsibility of the vendor and the entire cost for cryogenics, recharging or replacing the magnet should be borne by the vendor at no additional cost to CSIR-IIIM.</p> <ul style="list-style-type: none"> <li>➤ The standard samples used to validate the successful installation should be provided. The sealed NMR tubes containing the calibration sample should also be provided.</li> </ul>
<p><b>8. Accessories and Consumables</b></p>	<ul style="list-style-type: none"> <li>➤ Suitable online branded UPS (15 KVA) for 1 hour backup with branded ultra-shield maintenance free batteries.</li> <li>➤ 5HP compatible imported oil free, Noise free air scroll compressor compatible with the instrument with an additional (min of 90L) stainless-steel buffer tank and two dryer (one refrigerated air dryer, auto-drain valve, and one active alumina-based pressure swing dryer with suitable connectors fittings and filters).</li> <li>➤ One set of reference standards should be provided for full operational qualification and instrument performance verification.</li> <li>➤ All items for the preventive maintenance kit should be provided by the engineer during installation.</li> <li>➤ Essential spare parts for magnet/spectrometer should be provided.</li> <li>➤ One liquid Nitrogen Dewars 48-55 L, along with a trolley, for refilling of cryogens in the magnet.</li> <li>➤ One liquid Nitrogen transfer line setup (LN2 Dewar to magnet) for refilling of liquid nitrogen in NMR.</li> </ul>
<p><b>9. Warranty</b></p>	<ul style="list-style-type: none"> <li>➤ Three years comprehensive warranty on all items mentioned above, from the date of complete and satisfactory installation of the spectrometer including:</li> <li>➤ All parts of the entire instrument from the OEM , additional components including UPS, air compressor ,computer workstations.</li> <li>➤ Regular upgrades to all software during the warranty period.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Liquid helium supply and refilling: the vendor has to ensure that liquid helium is filled periodically during the warranty period for smooth functioning of the instrument to prevent any magnetic quenching and instrument breakdown.</li> <li>➤ During the last month of the three year warranty period, liquid helium should be filled for 100%.</li> <li>➤ If the instrument is not functional, the service engineer must visit within 48 hours upon.</li> <li>➤ In any case , of the machine is down for more than 15 continuous working days during the warranty period, number of days subsequently should be compensated by providing additional extended warranty free of cost.</li> </ul>
<b>10.Onsite Training</b>	<ul style="list-style-type: none"> <li>➤ After , successful installation, on-site training to the staff should be provided for 5 days or further required to do all possible representative experiments and for routine maintenance. Further, the vendor should provide a demonstration of all possible experiments that can be performed, data processing of 1D and 2D experiments for structure elucidation to be provided to the general users of CSIR-IIIM for an additional 3 days.</li> <li>➤ An additional 5 days of training should be provided within one year whenever required. This can include advanced training for setting up advanced NMR experiments/special application using software-installed pulse sequences from the manufacturer.</li> </ul>
<b>11.Others</b>	<ul style="list-style-type: none"> <li>➤ AMC charges for additional five years has to be mentioned. The AMC charges will not be used to determine lowest bidder, and the amount will not be part of the purchase order.</li> </ul>

**The following technical requirements should be strictly met and necessary documentation has to be enclosed along with the main quotation.**

- The spectrometer has to be optimized for the standard test/reference samples and to be successfully demonstrated at our site.
- Complete product catalogue describing all the required basic and optional items should be produced

#### 4. Eligibility Criteria:

##### **Technical:**

1. Original Equipment manufacturers (OEMs)/Authorized agent who have proven expertise in successful supply and installation criteria of 500 MHz NMR Spectrometer with Auto Sampler. The bidder should have successfully supplied and installed at least one 500 MHz NMR Spectrometer with Auto Sampler of similar specifications in any CSIR/IIT/ICAR/ICMR like Govt. research institutions. Documentary evidence to this effect shall be attached to the EOI/Proposal.

##### **Commercial:**

1. The bidder should not have been black listed/holiday listed by any other CSIR Laboratory, or by any other R&D organization or by Government of India. A self declaration letter in this regard must be enclosed.

#### 2. Proposals:

##### **i) Technical:**

- a) A detailed specifications of various machinery/Instruments involved supported by technical brochures/data sheets in English. The bidder shall provide the complete technical information (without any IP related material) with specific OEM name, Model no. etc.
- b) Write up/detailed brochure/datasheets on the technologies/techniques involved.
- c) Electrical requirements-Voltage, frequency, single phase, three phases. Total power consumption in kwh.
- d) Requirement of special foundation/flooring for each machine. If required, then clear details.
- e) Plant lay out drawing in English. Dimensions must be in Metric (mm/cm/metres)
- f) Other utilities required.
- g) Backup power supply like diesel generator requirements
- h) Total space for plant requirements.

##### **ii) Bidder Information:**

- a) Company Information: Status of bidder, registration certificate and detailed write up about bidder history.
- b) Details off Personnel: Details of all key technical, commercial and Service personnel.
- c) Details of Production Capacity, location of factory involved in production of machinery etc.
- d) Details of financial information about company in the last 3 years , like turnover, copies of audited balance sheet etc.
- e) Copy of solvency certificate from banker.
- f) Details of Service Setup in India.
- g) Self Certified letter about holiday listing/black listing in bidder letter head.
- h) If dealer/authorized channel partner/distributor etc. manufacturer authorization letter.
- i) Copies of Purchase Orders / Contracts of similar supply made in the last 2 years and the performance certificate from respective clients.
- j) The bidder shall indicate the timelines necessary for supply/installation/Commissioning and demonstration of the items under scope of work.

**Similar Work Experience Details:**

S. No.	Name of the Work with Location	Date & Ref. No. of completion certificate (if available)	Date of Start/Cost of Work	Ref. Document (Work order/Work completion certificate to be attached) mention pg no.

**3. Other Terms and Conditions:****a) Purchase of EOI Document:**

The expression of Interest document shall be downloaded from Central Public Procurement Portal (CPPP) of Government of India website <http://etenders.gov.in/eprocure/app> and CSIR-IIIM website [www.iiim.res.in](http://www.iiim.res.in) free of cost.

**b) Clarification on the EOI Document:**

Any clarification in the EOI document may be sent in writing to the following through email: [purchase@iiim.ac.in](mailto:purchase@iiim.ac.in)

However, no extension of the time or date of EOI submitted will be provided on the ground that CSIR-IIIM has not responded to any query/clarification raised by any bidder.

**c) Amendment of Terms and Conditions of EOI:**

CSIR-IIIM may at its discretion or as a result of a query, suggestion or comment of an bidder, may modify the EOI document by issuing an amendment or a corrigendum at any time before opening the EOI. Any such Addendum or Corrigendum will be uploaded on CPPP portal <http://etenders.gov.in/eprocure/app> and CSIR-IIIM's website and the same will be binding on all the bidders, as the case may be.

CSIR-IIIM as its discretion may extend the due date of submission of EOI and the decision of CSIR-IIIM in this respect would be final and binding on the respondents. In the event of changes in the time and schedule, CSIR-IIIM shall notify the same only through its CSIR-IIIM website [www.iiim.res.in](http://www.iiim.res.in). Interested bidders are advised to check the above website regularly for corrigendum/addendum, if any, which will be published only in the website.

No oral modification or interpretation of any provisions of this EOI shall be valid. Written communication shall be issued by CSIR-IIIM when changes, clarifications or amendments of the EOI document are deemed to necessary by CSIR-IIIM at its sole discretion.

EOI submission should be in English language. EOI response should be free from correction, over writing, erasures etc. Duly authorized representative of the Applicant shall sign on each page of the

EOI documents. EOI documents should be prepared in such a way so as to provide a straight forward, concise description of Applicant and capabilities to satisfy the requirements of this EOI.

If at any time during the examination, evaluation and comparisons of EOI, CSIR-IIIM at its discretion can ask the bidder for the clarification of its EOI, The request for clarification and the response shall be in writing. However, no post submission of EOI, Clarification at the initiative of the bidder shall be entertained.

Canvassing by respondents in any form, including unsolicited letters on EOI submitted or post correction shall render their EOI response liable for summarily rejection.

The cost or charges incurred in preparation and submission of EOI response shall not be entitled by any respondent.

Conditional offers will be summarily rejected. EOI which is found to be incomplete in content and / or attachments and / or authentication etc. is liable to be rejected.

No Agents/Agents or third party/parties are engaged by CSIR-IIIM in this process.

CSIR-IIIM is not responsible for any firm/agency expression or representing to express himself/herself/themselves to be the agent or third party representing CSIR-IIIM in this process.

It is advised to deal directly with CSIR-IIIM representative who is the signatory to this document. Disregard of any instruction may result in offer being ignored.

EOI that are incomplete in any respect or those that nor consistent with the requirement a specified in this document may be considered non-responsive and may be liable for rejection and no further correspondence will be entertained with such bidders.

All cost and expenses associated with submission of EOI will be borne by the bidder while submitting the EOI. CSIR-IIIM shall have no liability, in any manner in this regard, or if it decides to terminate the process of short listing for any reason whatsoever.

#### **NON-COMMITTAL EOI**

After short listing of bidders at this stage, the second stage bidding may not be restricted to short listed bidders only and CSIR-IIIM may resort to Open/Global Tendering for further participation by potential bidders. This may please be noted by all the concerned.

Sd/-

Stores & Purchase Officer  
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