



Bid Number/बोली क्रमांक (बिड संख्या): GEM/2024/B/56987:

Dated/दिनांक : 12-12-20

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	02-01-2025 21:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	02-01-2025 21:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	180 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Agriculture And Farmers Welfare
Department Name/विभाग का नाम	Department Of Agricultural Research And Education (dare)
Organisation Name/संगठन का नाम	Indian Council Of Agricultural Research (icar)
Office Name/कार्यालय का नाम	Icar-nrc On Pig, Rani, Guwahati-781131, Assam
Item Category/मद केटेगरी	Nucleic Acid Sequencing and Genotyping Service - Whole Genome Sequencing of Pig genome; As per the scope of work; As per the scope of work; As per the scope of work; As per the scope of work; 10x; As per the scope of work; A.. , Nucleic Acid Sequencing and Genotyping Service Whole Genome Bisulphite Sequencing; As per the scope of work; As per the scope of work; As per the scope of work; As per the scope of work; As per the scope of work; 10x; As per the scope of work; As p.. , Nucleic Acid Sequencing and Genotyping Service - Sanger Sequencing; As per the scope of work; As per the scope of work; As per the scope of work; 10x; As per the scope of work; As per the scope of w.. , Nucleic Acid Sequencing and Genotyping Service - sanger sequencing; As per the scope of work; As per the scope of work; As per the scope of work; 10x; As per the scope of work; As per the scope of w..
Contract Period/अनुबंध अवधि	1 Month(s) 4 Day(s)
Minimum Average Annual Turnover of the bidder (For 3 Years)/बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का)	15 Lakh (s)
MSE Exemption for Years Of Experience/अनुभव के वर्षों से एमएसई छूट/ and Turnover/टर्नओवर के लिए एमएसई को छूट प्राप्त है	Yes
Startup Exemption for Years Of Experience/अनुभव के वर्षों से स्टार्टअप छूट/ and Turnover/ टर्नओवर के लिए स्टार्टअप को छूट प्राप्त है	Yes

Bid Details/बिड विवरण	
Document required from seller/विक्रेता से मांगे गए दस्तावेज	Experience Criteria,Bidder Turnover,Certificate (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Do you want to show documents uploaded by bidders to all bidders participated in bid?/	No
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	No
Type of Bid/बिड का प्रकार	Two Packet Bid
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days
Evaluation Method/मूल्यांकन पद्धति	Item wise evaluation/
Arbitration Clause	No
Mediation Clause	No

EMD Detail/ईएमडी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
Schedule 1 EMD Amount/ईएमडी राशि (In INR)	30000
Schedule 2 EMD Amount/ईएमडी राशि (In INR)	7000
Schedule 3 EMD Amount/ईएमडी राशि (In INR)	6000
Schedule 4 EMD Amount/ईएमडी राशि (In INR)	2000

ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
ePBG Percentage(%) /ईपीबीजी प्रतिशत (%)	5.00
Duration of ePBG required (Months)/ईपीबीजी की अपेक्षित अवधि (महीने).	14

(a). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy./जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कैटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज प्रस्तुत करने हैं। एमएसई कैटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।

(b). The EMD Amount will be applicable for each schedule/group selected during Bid creation.

(c). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

Beneficiary/लाभार्थी :

Asstt. Administrative Officer

Icar-nrc On Pig, Rani, Guwahati-781131, Assam, Department of Agricultural Research and Education (DARE), Indian Council of Agricultural Research (ICAR), Ministry of Agriculture and Farmers Welfare (Uttam Prakash)

MII Compliance/एमआईआई अनुपालन

MII Compliance/एमआईआई अनुपालन	Yes
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. If the bidder is a Micro or Small Enterprise as per latest definitions under MSME rules, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.
2. If the bidder is a Startup, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to their meeting of quality and technical specifications. If the bidder is OEM of the offer products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.
3. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.
4. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference for services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered service. If L-1 is not an MSE and MSE Service Provider (s) has/have quoted price within L-1+ 15% of margin of purchase preference /price band as defined in the relevant policy, then 100% order quantity will be awarded to such MSE bidder subject to acceptance of L1 bid price. The buyers are advised to refer to the [OM No.1 4 2021 PPD dated 18.05.2021](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if the credentials of the service provider are validated on-line in GeM profile as well as validated and approved by the Buyer after evaluation of submitted documents.
5. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which will be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

Additional Qualification/Data Required/अतिरिक्त योग्यता /आवश्यक डेटा

Scope of Work:[1733998054.pdf](#)

Payment Terms:[1733998032.pdf](#)

Any Other Requirement by Buyer:[1733998039.pdf](#)

Evaluation Method (Item Wise Evaluation Method)

Contract will be awarded schedulewise and the determination of L1 will be done separately for each schedule. The details of item-consignee combination covered under each schedule are as under:

Evaluation Schedules	Item/Category	Quantity
Schedule 1	Nucleic Acid Sequencing And Genotyping Service - Whole Genome Sequencing Of Pig Genome; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; 10x; As Per The Scope Of Work; A..	Number of samples : 1
Schedule 2	Nucleic Acid Sequencing And Genotyping Service - Whole Genome Bisulphite Sequencing; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; 10x; As Per The Scope Of Work; As P..	Number of samples : 1
Schedule 3	Nucleic Acid Sequencing And Genotyping Service - Sanger Sequencing; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; 10x; As Per The Scope Of Work; As Per The Scope Of W..	Number of samples : 1
Schedule 4	Nucleic Acid Sequencing And Genotyping Service - Sanger Sequencing; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; 10x; As Per The Scope Of Work; As Per The Scope Of W..	Number of samples : 1

Nucleic Acid Sequencing And Genotyping Service - Whole Genome Sequencing Of Pig Genome; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; 10x; As Per The Scope Of Work; A. 1)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification	Values
Core	
Type of sequencing exercise to be done	Whole Genome Sequencing of Pig genome
Type of organism for sequencing	As per the scope of work
Type of sample	As per the scope of work
Sample collection option	As per the scope of work

Specification	Values
Which Chemistry / Platform you require	As per the scope of work
What quality reads per sample do you require	As per the scope of work
What depth /coverage do you require	10x
Service required for number of samples to be analyzed	As per the scope of work
What kind of output data is required	As per the scope of work
Data Delivery Mode	Physical media
Data delivery timeframe	As per the scope of work
What kind of QC parameters are required	As per the scope of work
Model of sequencing facility to be followed	As per the scope of work
Model of bioinformatics analysis facility to be followed	Inhouse
Consent for the sample to be sent abroad for testing	No
Testing Lab Accreditations Certifications	National Accreditation Board for Testing & Calibration Laboratories (NABL) , ISO 15189:2012 Medical laboratories — Requirements for quality and competence , ISO/IEC 17025 Testing and Calibration Laboratories , ISO/TS 22692:2020 Genomics informatics— Quality control metrics for DNA sequencing , DSIR certificate
Addon(s)/एडऑन	

Additional Specification Documents/अतिरिक्त विशिष्टि दस्तावेज़

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी

S.No./क्र. सं.	Consignee Reporting/Officer/परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Number of samples	Additional Requirement/अतिरिक्त आवश्यकता
1	Ratul Baishya	781131, ICAR- NATIONAL RESEARCH CENTRE ON PIG, RANI, GUWAHATI	1	N/A

Nucleic Acid Sequencing And Genotyping Service - Whole Genome Bisulphite Sequencing As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; 10x; As Per The Scope Of Work; As P.. (1**Technical Specifications/तकनीकी विशिष्टियाँ**

Specification	Values
Core	
Type of sequencing exercise to be done	Whole Genome Bisulphite Sequencing
Type of organism for sequencing	As per the scope of work
Type of sample	As per the scope of work
Sample collection option	As per the scope of work
Which Chemistry / Platform you require	As per the scope of work
What quality reads per sample do you require	As per the scope of work
What depth /coverage do you require	10x
Service required for number of samples to be analyzed	As per the scope of work
What kind of output data is required	As per the scope of work
Data Delivery Mode	Physical media

Specification	Values
Data delivery timeframe	As per the scope of work
What kind of QC parameters are required	As per the scope of work
Model of sequencing facility to be followed	As per the scope of work
Model of bioinformatics analysis facility to be followed	Inhouse
Consent for the sample to be sent abroad for testing	No
Testing Lab Accreditations Certifications	National Accreditation Board for Testing & Calibration Laboratories (NABL) , ISO 15189:2012 Medical laboratories — Requirements for quality and competence , ISO/IEC 17025 Testing and Calibration Laboratories , ISO/TS 22692:2020 Genomics informatics— Quality control metrics for DNA sequencing , DSIR certificate
Addon(s)/एडऑन	

Additional Specification Documents/अतिरिक्त विशिष्टि दस्तावेज़

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी

S.No./क्र. सं.	Consignee Reporting/Officer/परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Number of samples	Additional Requirement/अतिरिक्त आवश्यकता
1	Ratul Baishya	781131,ICAR- NATIONAL RESEARCH CENTRE ON PIG, RANI, GUWAHATI	1	N/A

Nucleic Acid Sequencing And Genotyping Service - Sanger Sequencing; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Wor As Per The Scope Of Work; 10x; As Per The Scope Of Work; As Per The Scope Of W.. (1)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification	Values
Core	

Specification	Values
Type of sequencing exercise to be done	Sanger Sequencing
Type of organism for sequencing	As per the scope of work
Type of sample	As per the scope of work
Sample collection option	As per the scope of work
Which Chemistry / Platform you require	As per the scope of work
What quality reads per sample do you require	As per the scope of work
What depth /coverage do you require	10x
Service required for number of samples to be analyzed	As per the scope of work
What kind of output data is required	As per the scope of work
Data Delivery Mode	Physical media
Data delivery timeframe	As per the scope of work
What kind of QC parameters are required	As per the scope of work
Model of sequencing facility to be followed	As per the scope of work
Model of bioinformatics analysis facility to be followed	Inhouse
Consent for the sample to be sent abroad for testing	No

Specification	Values
Testing Lab Accreditations Certifications	National Accreditation Board for Testing & Calibration Laboratories (NABL) , ISO 15189:2012 Medical laboratories — Requirements for quality and competence , ISO/IEC 17025 Testing and Calibration Laboratories , ISO/TS 22692:2020 Genomics informatics— Quality control metrics for DNA sequencing , DSIR certificate
Addon(s)/एडऑन	

Additional Specification Documents/अतिरिक्त विशिष्टि दस्तावेज़

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी

S.No./क्र. सं.	Consignee Reporting/Officer/परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Number of samples	Additional Requirement/अतिरिक्त आवश्यकता
1	Ratul Baishya	781131,ICAR- NATIONAL RESEARCH CENTRE ON PIG, RANI, GUWAHATI	1	N/A

Nucleic Acid Sequencing And Genotyping Service - Sanger Sequencing; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; As Per The Scope Of Work; 10x; As Per The Scope Of Work; As Per The Scope Of W.. (1)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification	Values
Core	
Type of sequencing exercise to be done	sanger sequencing
Type of organism for sequencing	As per the scope of work
Type of sample	As per the scope of work
Sample collection option	As per the scope of work
Which Chemistry / Platform you require	As per the scope of work
What quality reads per sample do you require	As per the scope of work

Specification	Values
What depth /coverage do you require	10x
Service required for number of samples to be analyzed	As per the scope of work
What kind of output data is required	As per the scope of work
Data Delivery Mode	Physical media
Data delivery timeframe	As per the scope of work
What kind of QC parameters are required	As per the scope of work
Model of sequencing facility to be followed	As per the scope of work
Model of bioinformatics analysis facility to be followed	Inhouse
Consent for the sample to be sent abroad for testing	No
Testing Lab Accreditations Certifications	National Accreditation Board for Testing & Calibration Laboratories (NABL) , ISO 15189:2012 Medical laboratories — Requirements for quality and competence , ISO/IEC 17025 Testing and Calibration Laboratories , ISO/TS 22692:2020 Genomics informatics— Quality control metrics for DNA sequencing , DSIR certificate
Addon(s)/एडऑन	

Additional Specification Documents/अतिरिक्त विशिष्टि दस्तावेज

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी

S.No./क्र. सं.	Consignee Reporting/Officer/परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Number of samples	Additional Requirement/अतिरिक्त आवश्यकता

S.No./क्र. सं.	Consignee Reporting/Officer/प रेषिती/रिपोर्टिंग अधिकारी	Address/पता	Number of samples	Additional Requirement/अतिरिक्त आवश्यकता
1	Ratul Baishya	781131, ICAR- NATIONAL RESEARCH CENTRE ON PIG, RANI, GUWAHATI	1	N/A

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

1. Generic

OPTION CLAUSE: The buyer can increase or decrease the contract quantity or contract duration up to 25 percent at the time of issue of the contract. However, once the contract is issued, contract quantity or contract duration can only be increased up to 25 percent. Bidders are bound to accept the revised quantity or duration.

2. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

Gem Bid Document for Procurement of essential services under AICRP

SCOPE OF WORK

The technical specifications are mentioned hereunder:

Service No.1: Whole Genome Sequencing of Pig genome

Number of samples: 15 nos.

- DNA extraction and Sequencing** - NGS using latest Platform & methodology. Library Preparation and Extraction and QC using NGS platform recommended protocol.
- DNA sequencing using minimum 120gb-130gb** data clean reads per samples on 2x150 chemistry
- Time frame:** Raw data should be delivered and Analysis within 30 days post sample pick up. Data Analysis raw data quality: Phred score should be Q>30
- Dry ice sample shipment from ICAR-NRC on Pig.
- Note:** Sample QC report, Library QC report and raw data QC should be provided at every stage.
- Quality control requirements:** Expected QC score of Q30>90% for data and want the RNA QC report, Library QC report, and Data QC report to be shared
- RNA extraction, Library preparation, sequencing and bioinformatic analysis of the samples should be carried out within the same laboratory in India only. (Strictly required)
- Bidder should have an in-house/Collaboration of latest sequencing facility. Details of same should be provided.
- Sample will be sent in a batch wise, The Rate must be included Transportation, Storage charges and Taxes.
- In-house Sequencing and Bioinformatics Facility in India, where this sequencing project will be run.
- Access to the laboratory must be provided to at least one researcher, if required.
- Data analysis must include:**
 - Raw Data QC and Reporting.
 - Alignment with reference genome
 - Variant calling
 - Variant Annotation
 - Raw data & raw data QC summary, alignment file & summary, variation calling file & summary (SNP, In-Del), basic variation annotation and effect file & summary.
 - Detailed quality report before and after trimming should be provided. It should include base quality and

uence quality score, distribution details, average base content and GC distribution in the reads, PCR amplification details, check for over represented sequences, adaptor trimming details, read length details (percentage of read length distribution), parameters used for trimming and details of software used for trimming/removal of low quality sequences/reads etc.

- Alignment and recalibration, variant calling and variant annotation using appropriate software. Details of alignment statistics and quality metrics obtained for each sample.
- List of Variant calling (SNP and INDELS) should be performed using standard tools.
- Variant filtration should be done using standard procedures and parameters used for filtering. List of software's and parameters used for annotation should be provided along with results.
- Annotation: Exonic, intronic, 3'UTR, 5'UTR, promoter region, conserved transcription factor binding sites, conserved intergenic region, active transcription region. Complete annotation and summary statistics should be provided.
- g. Cataloguing of common SNP/ unique SNP, ins/del.
- Summary report of variants called from each sample to be provided. Variant calling should be done individually and together (all samples together to produce single VCF file for all samples).
- Delivery Time: Sample DNA QC report should be submitted within 15 days after receiving the samples. Raw FastQ file, clean FastQ file and other quality and parameter files mentioned should be delivered within 25 days after initial QC report. BAM file, Filtered and unfiltered VCF files (VCF of individual samples and all samples together) and other parameters and quality files mentioned above should be delivered within the time frame.
- Raw data and .vcf file shall be provided in Hard disk.
- Support in responding to technical queries to reviewers, re-analysis or additional analysis of data using specific pipelines (If need during review process by the journals).
- In case of QC failure of any sample, the firm should arrange pickup and transportation of fresh sample from ICAR-NRC on Pig without additional cost.

Service No.2: Whole Genome Bisulphite Sequencing

Number of samples: 04 nos.

1. The integrity & quantification of the genomic DNA has to be checked by running agarose gel electrophoresis and gDNA need to be quantified.
2. The sequencing libraries need to be prepared according to latest NGS METHYL LIBRARY KIT.
3. Briefly, Fragmentation of 200ng of genomic DNA need to be performed using adaptive focused acoustic technology and the fragmented DNA is bisulfite-treated with Kit.
4. These bisulfite-converted DNA fragments have to be going through the addition of indexing adapters and purification.
5. The purified libraries need to be quantified using qPCR Quantification Protocol and latest NGS platform need for sequencing.

6. Quality Assessment:-

Tool:-Fastqc or other advance technology

Description:- Base quality and errors stats reporting from the raw Sequence fastq files.

7. Trimming & Filtering:-

Tool:- TrimGalore or other advance informatics

Description:- Trimming of adapters and poor quality sequences from raw fastq files resulting in trimmed fastq files.

8. Reference Alignment

Tool:-bwa-meth, Picard or other advance technology

Description

- a) Create reference genome index from the genome fasta file.
- b) Trimmed sequence reads are aligned to reference with BS aware alignment tool bwa-meth.
- c) Remove exact duplicated reads from the BAM alignment file by using Picard.

9. Methylation Extraction

Tool:-MethylDackel or other advance technology

Description

CpG site methylation calling from the BAM alignment file. Output is in bedGraph format or other advance and easily accessible format

10. Differential Analysis

Tool:- metilene, bsseq or other advance technology

Description

Differential methylation region detection from the sample specific methylation bedGraph files. Samples are grouped as Treated and Control for differential analysis.

- 11.** Samples (Tissue and RNA etc.) should not be sent out of India.
- 12.** Quotation should be on firm's letter head with GST Number, official account number, IFSC code and brief introduction of the company's background.
- 13.** Establishment of firm: Firm should be established in India.
- 14.** Data should be delivered through secured server and HDD only.
- 15.** The details of progress of experiment will be intimated to the customer/scientist and further processing in case of any issues will be based on the instructions of the customer only.
- 16.** In case of QC failure of any sample, the firm should arrange pickup and transportation of fresh sample from ICAR-NRC on Pig without additional cost.

Service No.3: Sanger sequencing

Number of samples: 250 nos.

1. Purification of PCR product
2. Sanger sequencing of purified PCR product
3. Sample to be collected from the institute by the service provider at their own cost
4. Complete sequencing report to send through email.
5. All the analysis has to be done in consultation with intender and step by step progress of the sequencing work should be intimated.
6. No data generated shall be transferred to any third party without explicit consent from the institute. Any violation will be treated as serious breach of contract, legal and other measures will be taken against the contracting firm including blacklisting.
7. Service provider must have in-house facility for quoted service and bioinformatics team for analysis of data. Institute reserves the right to verify the facility and if required may visit to bidders facility.
8. All samples have to be picked-up from ICAR-NRC on Pig, Rani, Guwahati, Assam and the cost shall be included in the total quoted amount.
9. The work has to be completed within 15 days of pickup of samples from ICAR-NRC on Pig, Rani on the cost of service provider.

Service No.4: Sanger sequencing

Number of samples: 2000bp

Required Specifications: Synthesis Scale(μmol)= 0.025

PREPARATION OF TECHNICAL BID

The Technical bid shall contain following documents failing which the bids are considered invalid and will be rejected.

1. EMD of [Rs. 45000/-](#) (online payment to "ICAR NR Centre on Pig" A/c No. 10029420452, State Bank of India)

FSC Code SBIN0009945, Khanapara Branch and proof of deposits must be uploaded. EMD is exempted for MSME/Startup firms as per the rules **(Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption for submission of EMD).**

If the bidder is the manufacturer of the quoted product/services and is a firm, then for claiming EMD exemption, the firm must submit a declaration that they are the original manufacturer of the quoted product/services by mentioning the brand name. They should be MSE registration certificate as manufacturer/service provider. Traders are excluded from the purview of this Policy and no exemption will be provided to the traders.

2. Information schedule as per enclosed performa **(Annexure-I).**

3. Copy of TAN/PAN card.

4. Copy of GST certificate.

5. Trade License/Registration Certificate/MSME Registration Certificate.

6. Annual Turnover Certificate of the last 3 years. The average annual turnover should be of at least 8 lakhs. **(Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption for submission of Annual Turnover. Traders are excluded from the purview of this Policy and no exemption will be provided to the traders.**

7. Submit/Upload at least 01 Number (one number) of work order awarded for similar work from any Govt./PSU/University/Autonomous bodies/Reputed Companies. The exemption criteria is exempted to MSME/Startup firms as per the rules. **Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption for submission of work order copy. Traders are excluded from the purview of this Policy and no exemption will be provided to the traders.**

8. The bidder should submit the compliance statement in the prescribed format as per **Annexure-II.**

9. The bidder should submit the Tender Acceptance Letter in the prescribed format as per **Annexure-III**

10. The bidder should submit the Make In India (MII) compliance statement in the prescribed format as per **Annexure-IV. The Make in India certificate should be submitted by the OEM only.**

***Bidders should ensure that all the documents submitted are genuine. If any documents are found to be fabricated or falsified the bid, contract if awarded will be rejected/cancelled and appropriate action including debarment, blacklisting and legal options will be taken. The institute reserves the right to verify the authenticity of documents (UDIN/UDYAM/MSME) submitted and the bidder will be required to produce the original document for verification, if required at ICAR-NRC on Pig**

PREPARATION OF FINANCIAL BID

-

Firm shall quote rates which shall be inclusive of all labour cost, material/spare cost, transportation & conveyance charges, administrative charges, monitoring and supervisory charges, agency profit, GST/Taxes etc.

Sd/-

Asstt. Administrative

Officer

-

ANNEXURE-I

Information Schedule

-

(Shall be submitted by the bidder in their letter head)

1.	Name of the Firm/Agency.	
2.	Address with Tel. No./Fax/E-mail.	
3.	Contract Person Name and Mobile No.	
4.	Bank Account No. Branch Code Bank Name	
5.	Whether all 10 Nos of documents as required/mentioned in Preparation of Technical Bids are uploaded/submitted.	Yes/No
6.	Whether the firm has any legal suit/criminal case pending against it or contemplated against them. If Yes, details thereof	Yes/No
7.	Whether the Agency had been blacklisted by any organization. If Yes, details thereof.	Yes/No

I/ we hereby certify that the information furnished above is correct and true to the best of our knowledge. We understand that in the event of information being found false at any stage, the agency will be blacklisted and will have no dealing with ICAF institutes.

Signature and Seal of the Bidder

Business

Address

-
-
-
-
-

ANNEXURE

Compliance statement in the prescribed format

The technical specifications are mentioned hereunder:

Sl. No.	Name of the services	Complete Specification	No. of samples	Quoted/Not Quoted (Please mention the Make and Model No. of the Product)	Complied to the required Specifications (Yes/No)
1.	Whole Genome Sequencing of Pig genome	<p>1. DNA extraction and Sequencing - NGS using latest Platform & methodology. Library Preparation and Extraction and QC using NGS platform recommended protocol.</p> <p>2. DNA sequencing using minimum 120gb-130gb data clean reads per samples on 2x150 chemistry</p> <p>3. Time frame: Raw data shall</p>	15 nos.		

- ould be delivered and Analysis within 30 days post sample pick up. Data Analysis. Raw data quality: Phred score should be $Q > 30$
4. Dry ice sample shipment from ICAR-NRC on Pig.
 5. **Note:** Sample QC report, Library QC report and raw data QC should be provided at every stage.
 6. **Quality control requirements:** Expected QC score of $Q30 > 90\%$ for data and want the RNA QC report, Library QC report, and Data QC report to be shared
 7. RNA extraction, Library preparation, sequencing and bioinformatic analysis of the samples should be carried out within the same laboratory in India only. (Strictly required)
 8. Bidder should have an in-house/Collaboration of latest sequencing facility. Details of same should be provided.
 9. Sample will be sent in a batch wise, The Rate must be included Transportation, Storage charges and Taxes.
 10. In-house Sequencing and Bioinformatics Facility in India, where this sequencing project will be run.
 11. Access to the laboratory must be provided to at least one researcher, if required.
 12. **Data analysis must include:**
 - Raw Data QC and Reporting.
 - Alignment with reference genome
 - Variant calling
 - Variant Annotation
 - Raw data & raw data QC summary, alignment file &

summary, variation calling file & summary (SNP, In-Dels), basic variation annotation and effect file & summary.

- Detailed quality report before and after trimming should be provided. It should include base quality and sequence quality score, distribution details, average base content and GC distribution in the reads, PCR amplification details, check for overrepresented sequences, adaptor trimming details, read length details (percentage of read length distribution), parameters used for trimming and details of software used for trimming/removal of low quality sequences/reads etc.
- Alignment and recalibration, variant calling and variant annotation using appropriate software. Details of read alignment statistics and quality metrics obtained for each sample.
- List of Variant calling (SNP and INDELS) should be performed using standard tools.
- Variant filtration should be done using standard procedures and parameters used for filtering. List of software's and parameters used for annotation should be provided along with results.
- Annotation: Exonic, intronic, 3'UTR, 5'UTR, promoter region, conserved transcription factor binding sites, conserved intergenic region, active transcription region. Complete annotation and summary statistics should be provided. g. Cataloguing of common SNP/ u

		<p>nique SNP, ins/del.</p> <ul style="list-style-type: none"> • Summary report of variants called from each sample to be provided. Variant calling should be done individually and together (all samples together to produce single VCF file for all samples). • Delivery Time: Sample DNA QC report should be submitted within 15 days after receiving the samples. Raw FastQ file, clean FastQ file and other quality and parameter files mentioned should be delivered within 25-30 days after initial QC report. BAM file, Filtered and unfiltered VCF files (VCF of individual samples and all samples together) and other parameters and quality files mentioned above should be delivered within the time frame. • Raw data and .vcf file shall be provided in Hard disk. • Support in responding to technical queries to reviewers, re-analysis or additional analysis of data using specific pipelines (If needed during review process by the journals). • In case of QC failure of any sample, the firm should arrange pickup and transportation of fresh sample from ICAR-NRC on Pig without additional cost. 			
<p>2.</p>	<p>Whole Genome Bisulphite Sequencing</p>	<ol style="list-style-type: none"> 1. The integrity & quantification of the genomic DNA has to be checked by running agarose gel electrophoresis and gDNA need to be quantified. 2. The sequencing libraries need to be prepared according to latest NGS METHYL LIBRARY KIT. 3. Briefly, Fragmentation of 200ng of genomic DNA need to be performed 	<p>04 nos.</p>		

d using adaptive focused acoustic technology and the fragmented DNA is bisulfite-treated with Kit.

4. These bisulfite-converted DNA fragments have to be going through the addition of indexing adapters and the purification.

5. The purified libraries need to be quantified using qPCR Quantification Protocol and latest NGS platform need for sequencing.

6. Quality Assessment:-

Tool:-Fastqc or other advance technology

Description:- Base quality and errors stats reporting from the raw

Sequence fastq files.

7. Trimming & Filtering:-

Tool:- TrimGalore or other advance informatics

Description:- Trimming of adapters and poor quality sequences from raw fastq files resulting in trimmed fastq files.

8. Reference Alignment

Tool:-bwa-meth, Picard or other advance technology

Description

a) Create reference genome index from the genome fasta file.

b) Trimmed sequence reads are aligned to reference with BS aware alignment tool bwa-meth.

c) Remove exact duplicated reads from the BAM alignment file by using Picard.

9.Methylation Extraction

Tool:-MethylDackel or other advance technology

Description

CpG site methylation calling from the BAM alignment file. Output is in bedGraph format or other advance and easily accessible format

10. Differential Analysis

Tool:- metilene, bsseq or other advance technology

Description

Differential methylation region detection from the sample specific methylation bedGraph files. Samples are grouped as Treated and Control for differential analysis.

11. Samples (Tissue and RNA etc.) should not be sent out of India.

12. Quotation should be on firm's letter head with GST Number, official account number, IFSC code and brief introduction of the company's background.

13. Establishment of firm: Fir

m should be established in India.

14. Data should be delivered through secured server and HDD only.

15. The details of progress of experiment will be intimate d to the customer/scientist and further processing in ca se of any issues will be bas ed on the instructions of th e customer only.

16. In case of QC failure of an y sample, the firm should ar range pickup and transport ation of fresh sample from I CAR-NRC on Pig without ad ditional cost.

3.	Sanger sequencing	<p>10. Purification of PCR product</p> <p>11. Sanger sequencing of purified PCR product</p> <p>12. Sample to be collected from the institute by the service provider at their own cost</p> <p>13. Complete sequencing report to send through email.</p> <p>14. All the analysis has to be done in consultation with intender and step by step progress of the sequencing work should be intimated.</p> <p>15. No data generated shall be transferred to any third party without explicit consent from the institute. Any deviation will be treated as serious breach of contract, legal and other measures will be taken against the contracting firm including blacklisting.</p> <p>16. Service provider must have in-house facility for quoted service and bioinformatics team for analysis of data. Institute reserves the right to verify the facility and if required may visit to bidders facility.</p> <p>17. All samples have to be picked-up from ICAR-NRC on Pig, Rani, Guwahati, Assam and the cost shall be included in the total quoted amount.</p> <p>18. The work has to be completed within 15 days of pickup of samples from ICAR-NRC on Pig, Rani on the cost of service provider.</p>	250 nos		
4.	Sanger sequencing	Required Specifications: Synthesis Scale(μmol)= 0.025	2000bp		

Signature and Seal of the Bidder

Business Addre

TENDER ACCEPTANCE LETTER

Date:

To,

**The Director,
ICAR-NRC on Pig
Rani, Guwahati -781131
Assam**

Dear Sir,

The Bid documents/corrigendum(s) issued forvide **Ge**
Bid No..... by your department/organization has been taken into c
sideration, while submitting this acceptance letter.

I/We hereby unconditionally accept all the tender/bid terms & conditions as menti
ed in tender/bid document(s)/ corrigendum (s) in its totality/entirety.

I/We do hereby declare that our Firm has not been blacklisted/debarred by any Go
. Department/Public sector undertaking.

I/We certify that all information furnished by our Firm is true & correct and in the c
ent that the information is found to be incorrect/untrue or found violated, then you
department/ organization shall without giving any notice or reason therefore or su
marily reject the bid or terminate the contract, without prejudice to any other righ
or remedy including the forfeiture of the fully said earnest money deposit absolute
.

3. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.
15. Any ATC clause in contravention with GeM GTC Clause 4 (xiii)(h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations

This Bid is governed by the [General Terms and Conditions/सामान्य नियम और शर्तें](#), conditions stipulated in Bid and [Service Level Agreement](#) specific to this Service as provided in the Marketplace. However in case if any condition specified in General Terms and Conditions/सामान्य नियम और शर्तें is contradicted by the conditions stipulated in Service Level Agreement, then it will over ride the conditions in the General Terms and Conditions.

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to under compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला स प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इस अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।

---Thank You/धन्यवाद---