Government of India
Bhabha Atomic Research Centre
Food Technology Division

Ref. FTD/1/13479/2022

Date: 31/01/2022
03/02/22

Sub: Invitation of quotation for bacterial whole genome sequencing

Dear Sir,

Quotations are invited from suitable and eligible bidders for the following work as per following details.

S. No	Name of items	Sample no.
1.	**Whole genome sequencing of Xanthomonas axonopodis pv. glycines wild type and its mutant strain** *As per Technical Specifications	2 No.

The general terms and conditions for submitting quotations are as follows:

1. The party shall arrange all materials & components required for the work.
2. The Party should furnish their **PAN No.** and **VAT/Service Tax/S.T. No** along with the quotation, otherwise their quotations are liable to be rejected. Moreover, it may please be emphasized that quotation is submitted on printed letter heads.
3. Quotation must reach **Head, Food Technology Division by 21st February, 2022 before 16.30 hrs** and should be sent in a sealed envelope superscripted with the above reference number and due date.
4. The address on the envelope should read:

   Head, Food Technology Division
   Bhabha Atomic Research Centre,
   Trombay, Mumbai – 400085
   Attn: Mrs. Jyoti Tripathi
5. No advance payment in full or in part will be admissible and payments will be made only after completion of the job.
6. The bidder should provide at least three work completion certificate during the current financial year.
7. The offer shall clearly indicate the **time required for completing the entire work, taxes or levy, if any. The offer shall be valid for a minimum period of 60 days from the date of opening the tender**.
8. The bidder shall deliver the service within 2 months from the date of issue of work order to the bidder.
9. The work proposed is meant for research purposes of Research Institution under the Dept. of Atomic Energy, and therefore, the purchaser will make available to the successful bidder with whom a work order is placed the 5% GST exemption certificate duly signed by the authorized officer in the Dept. of Atomic Energy well before the completion of the work. While submitting the offer, the bidders should specify in his offer that he is ready to pay 5% GST on the price quoted by him, subject to production of GST exemption certificate.
10. The acceptance of quotation will rest with **Head, Food Technology Division, BARC,** who does not bind himself to accept the lowest or any quotation and reserves to him the right to reject any or all quotations received without assigning any reason whatsoever.

(Mrs. Jyoti Tripathi)
SO/D, FTD

Through:

Gautam Satish
31.1.22

(Dr. S. Gautam)
Head, FTD, BARC

डॉ. एस. गौतम / Dr. S. Gautam
अध्यक्ष, खाद्य प्रौद्योगिकी प्रभाग / Head, Food Technology Division
जैव-विज्ञान वर्ग / Bio-Science Group
भाभा परमाणु अनुसंधान केंद्र / Bhabha Atomic Research Centre
भारत सरकार / Government of India
ट्रॉम्बे, मुंबई-400 085 / Trombay, Mumbai-400 085

TECHNICAL SPECIFICATIONS

All the quotations will be evaluated based on the technical expertise and previous projects done in the similar field by the bidding companies. Each technically suitable offer will be evaluated by a competent committee by audio and video conferencing if needed.

Sample pick up and processing charges to be included in the financial bid: (A provision of at least 3 times picking up of samples should be there and is invoked only if the sample fails in the quality control)- bidder must clarify this requirement and must explicitly mention in his quotation.

TECHNICAL AND FINANCIAL BIDS SHOULD BE SENT IN SEPARATE ENVELOPE AND FINANCIAL BIDS WILL BE OPENED ONLY TECHNICAL BIDS ARE FOUND SUITABLE.

Nature of the project:

Whole genome sequencing of Xanthomonas axonopodis pv. glycines wild type and its mutant strain (2 SAMPLES)

Most important specifications: The final sequence data should be given in such a format that it could be submitted to Genbank

Whole genome sequencing of Xanthomonas axonopodis pv. glycines wild type and its mutant strain of bacteria

1. Technology to be used: **Illumina or any other platform with similar capabilities** Analysis inclusive of DNA isolation, sample preparation and bioinformatic studies.
2. Application: Whole genome sequencing of bacterial DNA samples
3. Sample Type: Bacterial cells will be provided
4. 4.DNA extraction and quality control has to be performed by the firm.
5. Size: ~5 Mbp
6. Library Type: DNA fragmentation, repairing of end fragments and ligation of platform specific adaptors.
7. Platform: Sequencing on Illumina or similar platform, **5M -10M reads/sample**
8. NGS Standard Analysis of Genomes per Sample -identification of gene deletion, insertion in comparison to parent strain.
9. Quality Control should be done as per following criteria:
    a. Quality control of DNA Samples to be checked using Agarose gel electrophoresis and Qubit Fluorometer
    b. Bacterial DNA library to be prepared as per standard procedure; Library to be prepared separately for each biological replication, indexed, and multiplexed and to be run as a single sample for biological replicates (if required).
    c. Qubit and qPCR to be used for measuring the quantity of the library before sequencing.
    d. Read passing filter shall be more than 80% of bases higher than Q30 quality score.
10. Detailed Technical note should be provided for Bioinformatics Analysis variants/mutation annotation and interpretation. Comparison of sequenced information to the wild type. Identification of mutations including SNP sites.

11. Data Analysis: Raw Data QC and Report.

12. Methodology of Data Delivery- FTP (File Transfer Protocol)-**the raw data also should be provided for any further analysis.**
13. Data should be delivered through secured server & HDD only. To maintain data confidentiality, firm should not write data in CDs/DVDs.
14. Time lines to complete the project with complete analysis should be written clearly and should **not exceed more than 12 weeks**.
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. Failure to submit quotation as per the technical specification may deprive the concerned firm from consideration.
17. Acknowledgement letter given by any scientist who had used your services shall be included.
18. The company should have good experience/ record in conducting such experiments before with proof of publications and or certificate given in writing.
19. Entire work should be completed in 6-8 weeks' time.
20. Genomics lab: Service Provider lab should be certified by Agilent, Illumina and ISO for lab process.
21. Proof of Publications: Minimum 50 publications should be cited for NGS and Analysis.
22. The bidder should provide at least three work completion certificates during the current financial year
23. The bidder shall keep the sequence information and other details confidential.
24. No advance payment will be made for the service.

Mrs. Jyoti Tripathi

SO/D, FTD