

DEPARTMENT OF PLANT MOLECULAR BIOLOGY
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Tender Enquiry for Small RNA Sequencing and Standard Bioinformatic Analysis

E-tender is invited from national firms/institutes for Small RNA sequencing of four wheat (*Triticum aestivum*) samples with data analysis to be carried out as per specifications below:

1. Quality control of samples should be done using Qubit & Agilent Bioanalyzer, RIN (RNA integrity number) and value should be at least 6-8.
2. Required mRNA library preparation and transcriptome sequencing of four Plant (wheat) RNA samples using Illumina platform with 1× 50 single end sequencing chemistry.
3. A total of 30 million reads (or more) of >Q30. Need to generate 3-4 GB data per sample.
4. Carry out Bioinformatics analysis for these samples which includes:
 - a) Quality checking of sequence reads, filtering of high-quality sequence data and assembly of contigs. Following quality checks will be performed (i) Base quality score distribution, (ii) Sequence quality score distribution, (iii) Average base content per read, (iv) Read length distribution, (v) Biasing of k-mers.
 - b) Small RNA assembly and annotation (miRNA, siRNA, snoRNA, piRNA etc), target prediction. Raw data with quality and statistical analysis.
 - c) Reporting of known small RNA (miRNA and other non-coding RNA). Prediction of novel small RNAs. Prediction of miRNA/small RNA targets. Identify miRNA, siRNA, snoRNA etc

If data does not fulfill the above criteria, the data will not be accepted.

Sample Details: Four samples will be sent to the firm at one time. It will be the responsibility of the Service provider to collect the samples from the lab and transport to the sequencing center under proper conditions. The client will not provide any payment for the transportation of the samples.

Data delivery deadline: Sample (RNA) QC report should be submitted within 5 to 7 days after receiving the samples. Raw FastQ file, Clean FastQ file and sequencing details should be reach the client in hard disk(s) within 30 days after sample QC is completed.

Payment details: Payment by bank transfer will be made only after the receipt of the complete data in accordance with criteria already mentioned in the tender document. If data does not fulfil the above detailed criteria, the data will not be accepted and payment will not be made. If timely delivery of data is not done, penalty may be applied. If vendor does not follow the above mentioned detailed criteria the client has the full right to cancel the agreement with the vendor at any time. In that case no payment would be made.

Other mandatory terms and conditions:

1. The selection of the firm for the above mentioned service will be based on a **two bid system viz technical and financial bids**. Financial bids of only those vendors who clear the technical specifications will be opened and vendor quoting the lowest price, will be awarded the job.

2. Tender should be uploaded only at CPPP website: <https://eprocure.gov.in/eprocure/app> and Delhi University website.
3. Details of all protocols/methods followed for sequencing, and raw as well as high quality assembled sequence data should be provided in appropriate storage devices.
4. Bioinformatics analysis should be carried out by an experienced person (with publications on the same to his/her credit) who should have a PhD degree in the relevant subject.
5. Details of analysis and regular updates of work progress should be provided to the principal investigator.
6. Bioinformatics and post-analysis, which should not be limited to the above mentioned descriptions, some of the requirements may change depending on the initial leads, bioinformatics support is required until manuscript preparation and even to satisfy reviewers' comments, if any.
7. Vendors should provide evidence of technical expertise and experience in this area for completion of this work.
8. Vendor should provide in house **Illumina HiSeq 2500 or higher** facility certificate explicitly on the name of company (it should not be in lease or a tie up).
9. Samples or data should not be outsourced outside India at any stage.
10. Performance certificate of the company for last 5 years.
11. The company should also submit satisfactory certificate (Testimonial/Feedback certificate) from customers/Scientists/Institutes.
12. Quote price per sample inclusive all taxes.
13. Compliance sheet mentioning each of the points specified in the tender should be submitted along with the technical bid.

PLEASE NOTE: ONLY ONLINE SUBMISSIONS (AND NOT HARD COPIES) OF THE BIDS WILL BE CONSIDERED