



Ref. No. DPMB/SKA/NER-II/2019 /sRNA-Seq

Tenders are invited from service providers for '**Small RNA sequencing of *Vigna* sps. using Illumina HiSeq sequencing platform and bioinformatic analysis of the sequenced data**'. Quotations should be submitted following the **two-bid system** with **technical and financial bids to be** submitted separately.

Technical Specifications: Number of samples = 12

- Shipping of the samples under proper conditions from the laboratory to service facility to be provided by the service provider.
- Quality control of samples should be done using Qubit or Agilent Bioanalyzer or any other similar system. The data quality should be shared with the PI before initiating small RNA library construction.
- The service provider should prepare small RNA libraries and provide QC of the libraries before proceeding for sequencing.
- Sequencing of small RNA-seq libraries (50 bp, single end) using Illumina's HiSeq platform.
- Minimum 30 million high quality reads or more per sample should be generated for bioinformatics analysis.
- The bioinformatics analysis should include:
 - i) Quality checking of sequence reads, filtering of high-quality sequencing data, base composition, base quality score distribution, and statistical analyses of high-quality sequencing reads. Raw sequencing data, processed data, analyzed data and complete analysis report to be provided in a hard disk.
 - ii) Details of elimination pipeline steps and detailed list of putative small RNA population.
 - iii) Prediction of known and novel miRNAs.
 - iv) Detailed report of miRNAs including precursor structure, clustering of miRNAs into families, homology with miRBase member/family.
 - v) Expression profiling and differential expression analysis of predicted miRNAs.
 - vi) Characterization of other small RNAs such as siRNAs, snoRNAs, tasiRNAs and piRNAs (if any), their expression profiling and differential expression analysis.
 - vii) Computational prediction of putative targets from public database available on the crop and its close relatives and transcriptome data provided by us, their classification, significant biological analysis of Gene Ontology and pathway analysis.
- Detailed write-up of materials, protocols, methodology and analysis of results to be provided.
- Data analysis support till publication. This may include reanalysis (if required) while manuscript compilation and to address reviewer's comments.
- Service provider should have authored/co-authored or contributed in at least 5 research papers in reputed journals involving small RNA sequencing and analyses in last five years.
- Service provider should have provided services for NGS to government institutes in last 5 years. Please provide performance certificate/ user list with tender document.
- Confidentiality and non-disclosure agreement must be submitted.
- **Data delivery deadline:** Sample QC report should be submitted within 5-7 days after receiving the sample. Sequencing and data analysis should be carried out and final analyses report to

be submitted within 20 days of receiving the samples. In case timely delivery is not done, penalty may be applied, or order may be cancelled.

- *Payment terms and conditions:* The payment shall be made only on the completion and delivery of sequencing data along with bioinformatic analysis. The University reserves the right to amend any terms and conditions contained in the tender document or reject any or all applications/offers or not award the contract to the lowest bidder without giving any notice or assigning any reason thereof. The decision of the concerned will be final and binding. Detailed tender with terms and conditions is uploaded on CPPP portal: <https://eprocure.gov.in/eprocure/app>.

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