

Department of Genetics
University of Delhi South Campus
New Delhi- 110021

Tender Enquiry for Whole Exome Sequencing

UDSC/GEN/BKT/WES/1/2018

January 24, 2018

E-tender is invited from national and international firms/institutes with experience and expertise for **whole exome sequencing of 50-200 human samples without data analysis** to be carried out as per specifications below. Technical and financial bids should be submitted separately through CPP Portal (tender available on CPP Portal).

1) Whole Exome Sequencing:

- Whole exome sequencing should be performed using the Illumina HiSeq 2000/2500/3000/ 4000/Illumina X Ten
- Exome enrichment should be performed using Agilent **SureSelect Human All Exon V5/V6**
- Each sample should be sequenced to at least 50-fold (50X) mean on target depth. Prices for sequencing with Agilent **SureSelect Human All Exon V5** and Agilent **SureSelect Human All Exon V6** may be quoted separately, with 101/150-bp paired-end sequencing method
- For each sample >99% target regions (**SureSelect Human All Exon V5/V6**) should be captured and sequenced with minimum 1X, and >97% of the target regions should be captured and sequenced with minimum 10X. The on-target depth calculation is based on per base basis and should be calculated byQualimap after removal of PCR duplicates using Picard Toolsmark duplicates options with default parameters
- Minimum 5.5 GB for V5 and 6.5 GB for V6 clean data per sample (after removal of adapters and low quality sequence/reads, Phred quality score (Q score) <20 and reads with <70bp will not be considered) should be delivered..
- >95% of total data should be >Q30 Phred score
- Summary of complete sequencing runs should be provided
- >99% of the sequence/reads (after the removal of PCR duplicates and low quality sequences) should be aligned to the human reference genome (hg19). Alignment will be performed using BWA and alignment statistics calculation is based on Qualimap and Samtoolsflagstat

- If the client observes that the data is not up to the standard mentioned above, the service provider should accept it or disprove the claim by the client within three days using the same data delivered by the service provider and software used by the client using default parameters. If not done within three days data provided will be considered as bad quality and below mentioned conditions will automatically apply.

Sample Details: 50-200 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 centre under proper conditions. The client will not provide any payment for the transportation of the samples.

Data delivery deadline: Sample DNA QC report should be submitted within 5 days after receiving the samples. **Raw FastQ file, Clean FastQ file and sequencing details should be reach the client in hard disk(s) within 35 days after sample QC is completed.**

Other mandatory conditions

- 1) Vendors should submit evidence of prior experience for human whole exome/genome sequencing.
- 2) Vendors should have done whole exome sequencing of a minimum of 2000 human samples to date. Complete contact details of the clients for whom the above mentioned work is done should be provided. The firm should also submit a satisfaction report from clients (PIs) (of already completed project with minimum of 50 samples at one time) certifying both the quality of data and keeping to time frame of the order.
- 3) List of clients/institutes where vendors successfully completed whole exome/genome sequencing projects in last one year should be submitted
- 4) Vendors should provide evidence of technical expertise and experience in this area for completion of this work.

Payment: 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 will be applied. **In case of late delivery of data 1% of total cost will be deducted for delay of every day and delay of more than 25 days will lead to the cancellation of the order. 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.**


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

The qualified vendor should provide a bank guarantee of 30% of the total cost and should sign an agreement within five working days after receiving the work order, after which the samples will be handed over. This guarantee money will be returned immediately after successful completion of the work. If the vendor does not complete the project on time with above mentioned conditions the order will be cancelled and bank guarantee will not be

returned. If the vendor cancels the order due to their own internal problems the bank guarantee will not be returned.

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



Prof. B.K. Thelma
Department of Genetics
University of Delhi South Campus
New Delhi-110021