

NOTICE INVITING QUOTATION

DEPARTMENT OF BOTANY

UNIVERSITY OF DELHI

Open Tender Notice No. DUNC/Botany/SG/NER-II/2019/NGS-Seq

Dated: May 18, 2019

Department of Botany, University of Delhi is in the process of purchasing the following item(s) as per details given below.

Details of the items	RNA and DNA sequencing using HiSEQ sequencing platform and bioinformatic analysis of sequenced data
Tender Fees	Nil
Earnest money to be deposited	Nil

Tender Documents may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in>. Aspiring Bidders who have not enrolled/registered in e-procurement should enroll/register before participating through the website <http://eprocure.gov.in>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at "Instructions for online Bid Submission"

Tenderers can access tender documents on the website (For searching in the NIC site, kindly go to Tender Search option and type either the "tender notice no." or "Department of Botany"). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website <http://eprocure.gov.in> as per the schedule given in the next page.

No manual bids will be accepted. All quotation (both Technical and Financial should be submitted in the E-procurement portal).

SCHEDULE

Name of Organization	Department of Botany, University of Delhi
Tender Type (Open/Limited/EOI/Auction/Single)	Open
Tender Category (Services/Goods/works)	Services
Type/Form of Contract (Work/Supply/Auction /Service/Buy/Empanelment/ Sell)	Work and Supply
Product Category (Civil Works/Electrical/Works/ Fleet Management/ Computer Systems)	Services for NGS sequencing
Source of Fund (Institute/Project)	DST-SERB Project
Is Multi Currency Allowed	No, only INR quotes are allowed
Date of Issue/Publishing	May 17, 2019
Document Download Start Date	May 17, 2019
Document Download End Date	June 1, 2019
Date for Pre-Bid Conference	N.A.
Venue of Pre-Bid Conference	N.A.
Last Date and Time for Uploading of Bids	June 1, 2019
Date and Time of Opening of Technical Bids	June 3, 2019
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	180 days from date of opening
Address for Communication	Prof. Shailendra Goel, Department of Botany, University of Delhi, Delhi - 110007.
Contact No	9650229911
Email Address	shailendragoel@gmail.com

Chairman Purchase Committee

Instructions for Online Bid Submission

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

<http://eprocure.gov.in/eprocure/app>

REGISTRATION

1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL:<http://eprocure.gov.in/eprocure/app>) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their userID / password and the password of the DSC / eToken.

SEARCHING FOR TENDER DOCUMENTS

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP Port.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

3. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders.
5. Bidders can use "My Space" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS

1. Bidder should log into the site well in advance for bid submission so that he/she can upload the bid on time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. A standard format has been provided with the tender document (Annexure-V) to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable.
4. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
5. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done.
6. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

7. Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
8. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

ASSISTANCE TO BIDDERS

1. Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.

General Instructions to the Bidders

1. The tenders will be received online through portal <http://eprocure.gov.in/eprocure/app> . In the Technical Bids, the bidders are required to upload all the documents in .pdf format.
2. Possession of a Valid Class II/III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC".
3. Tenderers are advised to follow the instructions provided in the 'Instructions to the Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.



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TECHNICAL SPECIFICATIONS FOR NGS SEQUENCING

The Department of Botany, University of Delhi invites e-tenders (in two covers) for genome and transcriptome sequencing. Tenders are invited from service providers for '**RNA and DNA sequencing 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. Quotation should include both RNA and DNA sequencing components. Following are the Technical specifications:

RNA Sequencing

1. Shipping of the samples under proper conditions from the laboratory to service facility to be provided by the service provider.
2. Quality control of samples should be done using Qubit or Agilent Bioanalyzer or any other similar system.
3. cDNA library preparation and QC of each library should be done. QC should be shared with the undersigned before proceeding for the sequencing.
4. The libraries should be sequenced (150-bp, paired end) using Illumina's NGS platform.
5. 6-7 GB data per sample along with data QC and report for each sample should be provided.
6. Generated sequences should be filtered for reads with more than 80% bases having Q30. Data should strictly be delivered as paired end filtered sequences (at least 2 x 150 bp) with more than 100X coverage.
7. Quality filtered reads should be used for mapping, assembly, evaluation and quantitation of transcripts followed by their annotation.
8. Differential gene expression analysis between different samples. User would provide all the possible combinations for finding differential gene expression. This should be followed by functional classification and biological significance of transcripts.

9. Gene regulatory network modeling should be made to find the key regulated pathways.
10. Detailed write-up of materials and methodology employed should be provided.
11. The vendor should be able to support data analysis till publication. This might include re-analysis during manuscript compilation and to address reviewer's comments.
12. Service providers should have at least co-authored 5 transcriptome publications.
13. Service providers should provide a list of users (5 minimum). Service provider should have provided services for NGS to government institutes in last 5 years. Please provide performance certificate/ user list with tender document.
14. Confidentiality and non-disclosure agreement must be submitted.
15. *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.
16. Service provider should submit evidence of prior experience for Illumina based transcriptome sequencing projects only.
17. *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.

DNA Sequencing

1. QC of genomics DNA should be provided prior to the library construction.
2. The gDNA libraries should be prepared and their QC report should be shared with the undersigned before proceeding for the sequencing.
3. The libraries should be sequenced (150 bp, paired end) using Illumina's NGS platform.
4. Two genomes of size 500 Mb and 1 Gb are to be sequenced. Minimum 10 X coverage for each of the genome along with data QC and report for each sample should be provided.

5. Generated sequences should be filtered for reads with more than 80% bases having Q>30. Data should strictly be delivered as paired end filtered sequences (at least 2 x 150 bp) with minimum of 10 X coverage.
6. Quality filtered reads should be used for assembly and qualitative evaluation of the assembly.
7. Repeat masking and classification to be performed.
8. Coding and non-coding gene prediction and comprehensive annotation as per labs requirements to be performed.
9. Pan genome SSR marker identification and classification to be performed
10. Detailed write-up of materials and methodology employed should be provided.
11. The vendor should be able to support data analysis till publication. This might include re-analysis during manuscript compilation and to address reviewer's comments.
12. Service providers should have at least co-authored 5 eukaryotic genome publications.
13. Service providers should provide a list of users (5 minimum). Service provider should have provided services for NGS to government institutes in last 5 years. Please provide performance certificate/ user list with tender document.
14. Confidentiality and non-disclosure agreement must be submitted.
15. *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.
16. Service provider should submit evidence of prior experience for Illumina based genome sequencing projects only.
17. *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>*