

Kusuma School of Biological Sciences
Indian Institute of Technology, Hauz Khas, New Delhi 110016

September 8, 2011

Sub: NIQ for the purchase of a microarray platform

Sealed quotations are invited for the supply of a microarray platform for the Kusuma School of Biological Sciences. The technical specifications for microarray platform are given below.

1. Microarray System should be able to process pre-optimized & manufactured microarray slides for all the following applications
 - **Human Whole-Transcript Expression Analysis**
 - **Genome-Wide SNP Genotyping**
 - **Molecular Cytogenetics**
 - **Human 3' IVT Expression Analysis**
 - **Human Gene Regulation Analysis**
 - **Human miRNA Analysis**
 - **Copy Number Analysis**
2. Authentic literature and proof for all the above mentioned applications should be duly attached.
3. The vendor should clearly specify the manufacturer of arrays and consumables for all above mentioned applications (see specification No.1). The catalog numbers and details of the website where this information is available should be provided in addition to a hard copy with the details.
4. The microarray system should include a hybridization unit capable of processing up to 50 arrays at one time.
5. A state of the art scanner should with an automatic selection capability of reading low, medium and high density arrays with a resolution of atleast 0.55 μm (or better).
6. The microarray scanner should be able to scan high density arrays (preferably more than 5 Million features).
7. The scanner should have a sensitivity of 0.5 chromophore equivalents/ μm^2 .
8. The scanner should be able to support custom arrays.

9. The scanner should have technology for optimal image uniformity and collection efficiency across entire scan area.
10. The scanner should have the Automatic arc correction feature for checking and adjusting the changes in residual arc correction and x-linearity.
11. The scanner should have the integrated Barcode Reader.
12. An automated fluidics station for hands free washing and minimal chip exposure to environment should be included in the microarray system.
13. The automated fluidics Station should be capable of handling 4 arrays simultaneously for staining, destaining, washing.
14. The core system (hybridization unit + automated fluidics station + scanner) must be manufactured by the same company.
15. Majority of the arrays should be made and sold by the manufacturer of the core system (hybridization unit + automated fluidics station + scanner).
16. The vendor supplying the instrument should have its own fully functional microarray application support laboratory in India for efficient after sales service-support. The address of the application support lab should be clearly mentioned.
17. On-site training should be provided after the successful installation of the instrument.
18. The core system (hybridization unit + automated fluidics station + scanner) must be backed by as many publications as possible. There should be a minimum of 10 installations of the core system (this could include the older version of the same core system) in India and contact details for these installations should be provided.
19. System with resequencing application will be preferred.
20. Trained operator on microarray system should be provided for 2 years free of cost as and when required (subject to a maximum requirement of 12 hours a week).
21. Gene ontology software for pathway analysis should be supplied free of cost with a 2 year academic licence (2012-2013).
22. A peltier-based licensed 4 colour real-time PCR system compatible with the 96-well plate format for validation of microarray data along with a laptop for programming, analysis and storage of real-time PCR data. The laptop should have the following configuration (or a higher configuration) – i3 processor; 4 GB RAM; 500GB hard disk.

23. Five desktop computers for data analysis should be provided along with the microarray system at the time of installation. The desktops should have the following configuration (or a higher configuration) – i3 processor; 4 GB RAM; 500GB hard disk. An UPS should be provided with each desktop computer.
24. UPS online with 1 hour backup of 5Kva should be supplied along with the core system (hybridization unit + automated fluidics station + scanner).
25. The vendor should also provide arrays and consumables for the successful demonstration of the system (a minimum of 12 samples should be tested in triplicate) for gene expression, miRNA studies, SNP studies and promoter DNA methylation arrays.
26. The workstation should include an analyzer for RNA quality assessment & quantitation, PCR product analysis & QC, genotyping, restriction digests analysis etc.
 - The system must be capable of running a minimum of 48 samples in a single run.
 - The system should have a range of 25-10000bp for DNA analysis with sensitivity of 0.1ng/μl.
 - The system should have a validated wash step for sipper after running each sample to reduce cross contamination.
 - Laptop along with appropriate software for comprehensive analysis of RNA integrity, purity etc. should be included
27. The workstation should also include an open platform for automated DNA and RNA extraction with the following features:
 - Automated isolation and purification of DNA / RNA/ Plasmid through vacuum filtration and magnetic bead based method.
 - System should come with standard 96 channel head and have non-contact liquid level sensing ability.
 - Clog detection to check clogged wells during the process.
 - On-deck robotic gripper and built-in preoptimized protocols within the software for at least 3 leading commercially available extraction kits.
 - System should be able to perform other applications like serial dilution, normalization, PCR purification, reaction setup.
 - A Desktop PC along with appropriate software should be included
 - A UPS 3Kva with 1 hour backup of should be supplied along with this open platform for automated DNA and RNA extraction.

Terms and conditions:

1. A minimum 4 years warranty offered by the manufacturer (not the vendor) plus 1 year of AMC for all the equipments supplied with the exception of desktops and laptops.

General instructions:

1. Letter from the manufacturer specifically to quote for this tender is to be attached for authenticity of dealership/ agency and the dealer should be authorized service provider.
2. Vendor should get a fresh certificate directly from their product principal's clearly mentioning about warranty for four years on the systems to be delivered.
3. Special discount/ rebate wherever admissible keeping in view that the supplies made for educational purposes in respect of the public institution of national importance may please be indicated.
4. Vendors should attach the relevant product brochures for the model quoted.
5. Validity of the quotation should be at least three months.
6. Vendors will do the installation and demonstration of the equipment at IIT Delhi premises without additional charges.
7. Taxes, terms and conditions should be clearly mentioned.
8. In the case the items are proprietary products of the company, a proprietary item certificate stating the same may be provided.
9. A compliance statement for required specifications should be attached.
10. Payment terms and conditions should be clearly mentioned. No advance payment is encouraged by IIT Delhi.
11. Firm MUST provide a compliance statement vis-à-vis specifications in a "tabular form" clearly stating the compliance and giving justification, if any supported by technical literature with clear reference of page number, paragraph or lines. This statement must be signed, with the company seal, by the tendered for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification of the tender. The quotation should be complete in all respects (as per IIT-Delhi rules).

The Institute/ purchase committee has the right to accept or reject any bid or all quotations without assigning any reason whatsoever.

Sealed quotations in separate envelopes of Technical and Commercial bids kept in one sealed outer envelope (super-scribed "Quotation for microarray platform") should be addressed to **Dr.**

Vivekanandan Perumal, Kusuma School of Biological Sciences, IIT-Delhi, Hauz Khas, New Delhi 110016 and should reach the **Kusuma School of Biological Sciences office, IIT-Delhi by 1200 hrs on 5th October, 2011.**