

DEPARTMENT OF VETERANS AFFAIRS

Justification and Approval Under Simplified Acquisition Procedures for Restricting Competition

1. Contracting Activity:

Department of Veterans Affairs, VISN 20, for VA Puget Sound Medical Center, Research and Development, Seattle, WA.

2. Nature and/or Description of the Action Being Processed:

Puget Sound Research & Development is requesting sole source purchase of a package to upgrade our existing VAPSHCS-owned Illumina HiSeq DNA sequencing system from the current 1000 model to a 2500. This purchase is one component of two pieces of equipment that were the result of a successful application through the Shared Equipment Evaluation Program Request (SHEEP) – Research Equipment 2013. Funding is provided on VA 2237: 663-13-3-3163-1167

3. Description of Supplies or Services Required to Meet the Agency's Needs:

Upgrading the system to a 2500 model will increase our sequencing capacity, provide us with run flexibility and allow us to make use of upcoming advances in Illumina sequencing chemistry. Upgrading the existing system is preferable to replacement. Purchase of a new HiSeq 2500 costs >\$700,000, while an upgrade runs \$255,000. The upgraded instrument will possess all of the same features that a brand new 2500 does. The infrastructure for supporting this system and generating DNA sequence data is already in place at the VAPSHCS Medical Genomics Laboratory (MGL), under the direction of Dr. Michael Dorschner, a seasoned molecular geneticist with over six years of experience with next generation DNA sequencing technology. The HiSeq 2500 will improve and expand existing capabilities by increasing throughput, allowing us to produce whole genome sequence data, in addition to the current assays of whole exome, transcriptome (RNA-Seq) and epigenomic assays in a more efficient manner. Upgrading our existing system will have a major impact on our research programs. The benefits of the upgraded system include: 1) improved fluidics and server, providing a more robust, reliable system with less instrument down time; 2) rapid run mode, giving us greater flexibility and run speed; 3) enhanced throughput, accommodating whole genome sequencing; 4) ability to make use of upcoming chemistry advances, due to be released in the second half of 2013. The transaction number associated with this purchase is 663-13-3-3163-1167. The value of the acquisition, with options is \$255,000 (see quote 2013-56650) The delivery date is unknown, although it is hoped that it will be delivered within a month of the order being placed. The equipment will be located in Building 13, Room 203, of the VAPSHCS, Seattle Division, which currently houses the Medical Genomics Laboratory.

4. Statutory Authority Permitting Restriction in Competition:

The authority for single source procurement is Section 4202 of the Clinger-Cohen Act of 1996 as implemented by FAR 13.501(a), the test program for commercial items. In accordance with FAR 13.106-1(b) the contracting officer has determined that the circumstances of the contract action deem

only one source reasonably available due to only one responsible source and no other supplies or services will satisfy agency requirements.

5. Demonstration that the Contractor's Unique Qualifications or Nature of the Acquisition Requires the Use of the Authority Cited Above (applicability of authority):

This request is required to be sole source because:

- a) The funds for the purchase were awarded through the Shared Equipment Evaluation Program on the basis of an application for this specific equipment upgrade through Illumina Inc.(see grant application). The make, model and options must be purchased as described in the grant application.
- b) This request is made on the basis of compatibility with existing infrastructure. Illumina is the sole provider of parts to upgrade the existing HiSeq system. There are no alternate vendors for these components. The package includes instrument-specific parts to upgrade the fluidics, optics and instrument control systems. This upgrade will improve data quality and throughput.
- c) Using novel reversible terminator-based sequencing-by-synthesis chemistry, this technology can sequence billions of DNA fragments in a massively parallel fashion. Illumina is the only vendor who utilizes this technology.
- d) The HiSeq 2500 system is comprised of three components: (1) HiSeq sequencer; (2) the cBot, a fluidics station required for cluster generation within channels of the flow cell; and (3) a compute cluster for the secondary and tertiary analysis of the resulting sequence data. Items 2 & 3 do not require upgrade but will be function in an integrated manner with the HiSeq 2500, as they do with the existing instrument. This integrated system can be used to generate DNA sequence data for a rapidly growing list of applications, including whole genome sequencing, whole exome sequencing, transcriptome analysis (RNA-Seq) and epigenetic analysis.

6. Description of Efforts Made to Ensure that Offers are Solicited from As Many Potential Sources as Deemed Practicable IAW FAR 13.104:

Market research was conducted by the end user and the contracting officer, and no other source was found that could potentially meet the requirements. Extensive web searching was conducted by the contracting officer just in an attempt to find price reasonableness and no other source was identified except the manufacturer, Illumina.

7. Determination by the Contracting Officer that the Anticipated Cost to the Government will be Fair and Reasonable – IAW FAR 13.106-3:

In accordance with FAR 13.106-3(a)(2), the proposed price of \$255,000.00 will be fair and reasonable based on:

- a) Current list prices, catalogs, or advertisements: The quote from Illumina shows a 15% discount from list price.
- b) Market Research: the 2012 NGS Field Guide as published by the Molecular Ecologist lists the price to upgrade from the HiSeq 1000 to the HiSeq 2000 as \$175,000, and the upgrade from HiSeq 2000 to HiSeq 2500 as \$50,000. A conversation with the end user indicates that the 2000 to 2500 rate was a special offer good during 2012 only, and that discount has expired. This special pricing totals \$225,000, which is within 12% of the current proposed price.
- c) Any other reasonable basis: The price of purchasing a new HiSeq 2500 is estimated at \$750,000.00, and these upgrades will enable our existing HiSeq 1000 to perform to the exact

same specifications as a brand new HiSeq 2500. In comparison, the 2012 list price for a HiSeq 1000 is \$560,000.00. The contracting officer feels that the relative costs of the upgrades and base machine price are reasonable when compared to the cost of a brand new machine with the same functionality.

8. Description of the Market Research Conducted and the Results, or Statement of Reasons Market Research was not Conducted (FAR 10):

Indications from Dr. Michael Dorschner, the manager of the Molecular Genomics Core are that Illumina is the only provider of hardware and software upgrades for the Illumina 1000 that we now have in the facility.

Market research conducted by the contracting officer using Internet searches, FPDS, FBO, and the SBA's dynamic small business search tool revealed no other potential sources for this equipment upgrade.

9. Any Other Facts Supporting the Restriction of Competition:

None

10. Listing of Sources that Expressed, in Writing, an Interest in the Acquisition:

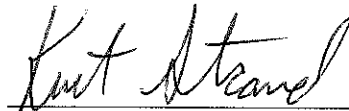
None

11. Statement of Actions, if any, the Agency May Take to Remove or Overcome any Barriers to Competition before Making Subsequent Acquisitions for the Supplies or Services Required:

The framework for the SHEEP grant application requires the product to be specified as part of the application package. If approved, funding is conditional on the purchase of the exact brand and model approved in the grant. The options for competition are limited to suppliers of the specific brand and model of the item listed in the grant application package.

12. Requirements Certification - IAW FAR 13.501:

I certify that the requirement outlined in this justification is a bonafide need of the Department of Veterans Affairs and that the supporting data under my cognizance, which are included in the justification, are accurate and complete to the best of my knowledge and belief.



Kurt Strand, PhD
R&D Lab Operations and Logistics
Puget Sound VA Medical Center

8/7/2013
Date

13. **Approvals in accordance with FAR 13.501:**

- a. **Contracting Officer's Certification: (required)** I certify that the foregoing justification is accurate and complete to the best of my knowledge and belief.

Bethany Ireton
Contracting Officer
NCO 20 Supply Team B

Date

- b. **Acquisition Manager's Review and Approval:**

I have reviewed the foregoing justification and find it to be complete and accurate to the best of my knowledge and belief and recommend approval for other than full and open competition.

For

Nicholas M. Jenkins
NCO 20 Network Contracts Manager
Service Area Office – West

8/8/13

Date