

Posting Date: July 18, 2022

Closing Date: July 28, 2022, 11:30 a.m. ET

Reference Number: 22-043175

To: NCI Bid Board

From: Sharon Coles-Calloway
NCI DCEG Purchasing Agent
coless@mail.nih.gov

Subject: NCI Bid Board Posting – SMRT Cell trays for use with Sequel II and IIe sequencing systems.

The National Cancer Institute Division of Cancer Epidemiology and Genetics Laboratory of Translational Genomics (LTG) lab conducts focused studies to explain the functional significance of particular regions of the genome conclusively identified in cancer-specific genome-wide association studies (GWAS) and linkage studies in high-risk families. The overall goal of the lab is to develop new approaches to the study of the genetic basis of cancer and its outcomes. Specifically, we are investigating the genetic basis of strong association signals identified in candidate gene association studies, loci identified by linkage analysis of high-risk families, or genome-wide association studies.

Many commercially available sequencing platforms are short-read sequencing methods. Short-read technologies generally have limitations such as GC-skewing biases (3), inability to map complex genomes (4), and difficulty mapping repetitive regions (5). One aim of this project is to detect extrachromosomal circular DNA (ecDNA). High molecular weight DNA has been extracted from cell lines and, under various conditions, has been treated to select for and preferentially amplify circular DNA. For this project, long-read sequencing is required for detecting larger structural variants like ecDNAs, rather than the single nucleotide variants (SNVs) or small insertion and deletions (indels) examined in short-read sequencing.

The National Cancer Institute plans to purchase the SMRT Cell 8M single-use tray and the SMRT Cell 8M tray for use with Sequel II and IIe sequencing systems from Pacific Biosciences, Menlo Park, CA . These products will be used for sequencing of high molecular weight DNA extracted from cell lines, treated to select for and preferentially amplify circular DNA. This is not a request for competitive quotation. However, if any interested party believes it can meet the attached requirements, it may submit a statement of capabilities. The capability statement must be in writing and must contain information and material in sufficient detail to allow NCI to determine if the party can fully meet this requirement. The capability statement must be received in the contracting office by 11:30 AM on July 28, 2022, ET. A determination by the Government not to compete this requirement based upon responses to this notice is solely within the discretion of the Government. Information received will be considered solely for the purpose of determining whether to conduct a competitive procurement.

Sole Source Justification:

Pacific Biosciences (PacBio) and Oxford Nanopore both offer long-read sequencing platforms, PacBio offers a product that is unique in its methodology. PacBio's Single-Molecule Real-Time (SMRT) sequencing uses SMRTbell, a single-

stranded circular DNA with hairpin adaptors ligated to both ends of the target DNA (1). In contrast, Nanopore sequences from reported changes in electrical current caused by nucleic acids passing through a nanopore (2). While both methods produce long-read sequencing data, they have unique limitations, as described below.

For long-read sequencing, Oxford Nanopore is the closest direct competitor of PacBio's SMRT sequencing platform. Nanopore and SMRT use distinct sequencing techniques, and SMRT seq base call error rate is reported at <1%, while Nanopore's is <5% (6,7). This higher accuracy is a result of Pacific Bioscience's circular consensus sequencing, developed by and reported in Wenger et al. in a 2019 Nature Biotechnology paper (6). This technique reads the DNA template multiple times to derive a consensus sequence, in comparison to Nanopore's one read per template (6).

Attached Documents:

SF18

Statement of Need

FAR Clause 52.213-4 Simplified Acquisitions Terms and Conditions (AUG 2019) is applicable and available in full text upon request

FAR Clause 52.204-24 Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment

REQUEST FOR QUOTATION (THIS IS NOT AN ORDER)		THIS RFQ <input type="checkbox"/> IS <input type="checkbox"/> IS NOT A SMALL BUSINESS SET-ASIDE		PAGE OF PAGES
1. REQUEST NO.	2. DATE ISSUED	3. REQUISITION/PURCHASE REQUEST NO.	4. CERT. FOR NAT. DEF. UNDER BDSA REG. 2 AND/OR DMS REG. 1	RATING
5a. ISSUED BY			6. DELIVER BY (Date)	
5b. FOR INFORMATION CALL (NO COLLECT CALLS)			7. DELIVERY	
NAME		TELEPHONE NUMBER		<input type="checkbox"/> FOB DESTINATION <input type="checkbox"/> OTHER (See Schedule)
		AREA CODE	NUMBER	9. DESTINATION
8. TO:				
a. NAME		b. COMPANY		b. STREET ADDRESS
c. STREET ADDRESS				c. CITY
d.. CITY		e.. STATE	f.. ZIP CODE	d.. STATE e. ZIP CODE
10. PLEASE FURNISH QUOTATIONS TO THE ISSUING OFFICE IN BLOCK 5a ON OR BEFORE CLOSE OF BUSINESS (Date)		IMPORTANT: This is a request for information, and quotations furnished are not offers. If you are unable to quote, please indicate on this form and return it to the address in Block 5a. This request does not commit the Government to pay any costs incurred in the preparation of the submission of this quotation or to contract for supplies or services. Supplies are of domestic origin unless otherwise indicated by quoter. Any representations and/or certifications attached to this Request for Quotations must be completed by the quoter.		

11. SCHEDULE (Include applicable Federal, State and local taxes)

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)

12. DISCOUNT FOR PROMPT PAYMENT	a. 10 CALENDAR DAYS (%)	b. 20 CALENDAR DAYS (%)	c. 30 CALENDAR DAYS (%)	d. CALENDAR DAYS
				NUMBER PERCENTAGE

NOTE: Additional provisions and representations are are not attached.

13. NAME AND ADDRESS OF QUOTER		14. SIGNATURE OF PERSON AUTHORIZED TO SIGN QUOTATION	15. DATE OF QUOTATION
a. NAME OF QUOTER			
b. STREET ADDRESS		16. SIGNER	
c. COUNTY		a. NAME (Type or print)	b. TELEPHONE
d. CITY		AREA CODE	
e. STATE f. ZIP CODE		c. TITLE (Type or print)	
		NUMBER	

STATEMENT OF NEED (SON)

1.0 TITLE

Pacific Biosciences SMRT Cell sequencing reagents

2.0 BACKGROUND

This package contains two types of SMRT Cell trays for use with Sequel II and IIe sequencing systems. These products will be used for sequencing of high molecular weight DNA extracted from cell lines, treated to select for and preferentially amplify circular DNA.

3.0 TYPE OF ORDER

This is a Firm Fixed-Price Purchase Order.

4.0 SPECIAL ORDER REQUIREMENTS

4.1 PRODUCT FEATURES/SALIENT CHARACTERISTICS

The following product features/characteristics are required for this requirement:

- Pacific Biosciences SMRT Cell 8M single-use tray (Pacific Biosciences 102-281-700)- Sequel II and IIe system single use SMRT Cell tray (1 SMRT Cell 8M), quantity: 1 unit
- Pacific Biosciences SMRT Cell 8M tray (Pacific Biosciences 101-389-001)- Sequel II and IIe system SMRT Cell tray (4 SMRT Cells 8M), quantity: 6 units

4.2 DELIVERY / INSTALLATION

One time delivery made within 30 days of award

4.3 TRAINING

n/a

5.0 PAYMENT

Payment shall be made once. Payment authorization requires submission and approval of invoices to the COR and NIH OFM, in accordance with the payment provisions listed below:

The following clause is applicable to all Purchase Orders, Task or Delivery Orders, and Blanket Purchase Agreement (BPA) Calls: PROMPT PAYMENT (JUL 2013) FAR 52.232-25. Highlights of this clause and NIH implementation requirements follow:

I INVOICE REQUIREMENTS

STATEMENT OF NEED (SON)

- A. An invoice is the Contractor's bill or written request for payment under the contract for supplies delivered or services performed. A proper invoice is an "Original" which must include the items listed in subdivisions 1 through 12, below, in addition to the requirements of FAR 32.9. If the invoice does not comply with these requirements, the Contractor will be notified of the defect within 7 days after the date the designated billing office received the invoice (3 days for meat, meat food products, or fish, and 5 days for perishable agricultural commodities, dairy products, edible fats or oils) with a statement of the reasons why it is not a proper invoice. (See exceptions under II., below.) Untimely notification will be taken into account in the computation of any interest penalty owed the Contractor.
1. Vendor/Contractor: Name, Address, Point of Contact for the invoice (Name, title, telephone number, e-mail and mailing address of point of contact).
 2. Remit-to address (Name and complete mailing address to send payment).
 3. Remittance name must match exactly with name on original order/contract. If the Remittance name differs from the Legal Business Name, then both names must appear on the invoice.
 4. Invoice date.
 5. Unique invoice #s for all invoices per vendor regardless of site.
 6. NBS document number formats must be included for awards created in the NBS: Contract Number; Purchase Order Number; Task or Delivery Order Number and Source Award Number (e.g., Indefinite Delivery Contract number; General Services Administration number); or, BPA Call Number and BPA Parent Award Number.
 7. Data Universal Numbering System (DUNS) or DUNS + 4 as registered in the Central Contractor Registration (CCR).
 8. Federal Taxpayer Identification Number (TIN). In those exceptional cases where a contractor does not have a DUNS number or TIN, a Vendor Identification Number (VIN) must be referenced on the invoice. The VIN is the number that appears after the contractor's name on the face page of the award document.
 9. Identify that payment is to be made using a three-way match.
 10. Description of supplies/services that match the description on the award, by line billed.*
 11. Freight or delivery charge must be billed as shown on the award. If it is included in the item price do not bill it separately. If identified in the award as a separate line item, it must be billed separately.
 12. Quantity, Unit of Measure, Unit Price, Extended Price of supplies delivered or services performed, as applicable, and that match the line items specified in the award.*

* NOTE: If your invoice must differ from the line items on the award, please contact the Contracting Officer before submitting the invoice. A modification to the order or contract may be needed before the invoice can be submitted and paid.

- B. Shipping costs will be reimbursed only if authorized by the Contract/Purchase Order. If authorized, shipping costs must be itemized. Where shipping costs exceed \$100, the invoice must be supported by a bill of lading or a paid carrier's receipt.
- C. Mail an original and 1 copy of the itemized invoice to:

National Institutes of Health

STATEMENT OF NEED (SON)

Office of Financial Management, Commercial Accounts
2115 East Jefferson Street, Room 4B-432, MSC 8500
Bethesda, MD 20892-8500

For inquiries regarding payment call: (301) 496-6088

In order to facilitate the prompt payment of invoices, it is recommended that the vendor submit a photocopy of the invoice to the "Consignee" designated for the acquisition in blocks 6A – 6E of the face page of the Order/Award document.

II. INVOICE PAYMENT

- A. Except as indicated in paragraph B., below, the due date for making invoice payments by the designated payment office shall be the later of the following two events:
 - 1. The 30th day after the designated billing office has received a proper invoice.
 - 2. The 30th day after Government acceptance of supplies delivered or services performed.
- B. The due date for making invoice payments for meat and meat food products, perishable agricultural commodities, dairy products, and edible fats or oils, shall be in accordance with the Prompt Payment Act, as amended.

III. INTEREST PENALTIES

- A. An interest penalty shall be paid automatically, if payment is not made by the due date and the conditions listed below are met, if applicable.
 - 1. A proper invoice was received by the designated billing office.
 - 2. A receiving report or other Government documentation authorizing payment was processed and there was no disagreement over quantity, quality, or contractor compliance with a term or condition.
 - 3. In the case of a final invoice for any balance of funds due the contractor for supplies delivered or services performed, the amount was not subject to further settlement actions between the Government and the Contractor.
- B. Determination of interest and penalties due will be made in accordance with the provisions of the Prompt Payment Act, as amended, the Contract Disputes Act, and regulations issued by the Office of Management and Budget.

IV. PROVIDING ACCELERATED PAYMENT TO SMALL BUSINESS SUBCONTRACTORS, FAR 52.232-40 (DEC 2013)

- a) Upon receipt of accelerated payments from the Government, the Contractor shall make accelerated payments to its small business subcontractors under this contract, to the maximum extent practicable and prior to when such payment is otherwise required under the applicable contract or subcontract, after receipt of a proper invoice and all other required documentation from the small business subcontractor.

STATEMENT OF NEED (SON)

- b) The acceleration of payments under this clause does not provide any new rights under the prompt Payment Act.

Include the substance of this clause, include this paragraph c, in all subcontracts with small business concerns, including subcontracts with small business concerns for the acquisition of commercial items.