

USM SSP 23_036 Notice of Proposed Sole Source Purchase of 10X Genomics Chromium iX Single Cell Immune Profiling system.

http://www.ms.gov/dfa/contract_bid_search/Bid

RFx: 3150005035

Comments/objections will be received as required per Section 31-7-13 (C) of the Mississippi Code until 8:00 a.m. (Central Time) on June 23, 2023.

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Steve Ballew

Director of Procurement & Contracts 118 College Dr. Box 5003 Hattiesburg, MS 39406

bids@usm.edu

Phone: 601-266-4131

Subject Line must read "Sole Source Objection USM SSP 23_036"

The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, USM determines that the commodity in the proposed sole source request can be provided by another person or entity, then USM will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If USM determines after review that there is only one (1) source for the required commodity, then USM will appeal to the Public Procurement Review Board. USM will have the burden of proving that the commodity is only provided by one (1) source.

Run Dates: 6/8, 6/15

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The University of Southern Mississippi anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. Description of the commodity that USM is seeking to procure:

The University of Southern Mississippi is requesting purchase of a 10X Genomics Chromium iX Single Cell Immune Profiling system. The Chromium iX is a scalable microfluidic platform for immune profiling of up to 80,000 cells per run. The system is able to process thousands of micro-reactions in parallel, resulting in tens of thousands of uniquely addressable partitions. The Chromium iX uses patented Next GEM (Gel Beads-in-Emulsion) technology to individually barcode the samples to create short-read sequencer compatible libraries. The instrument can generate these uniquely labeled sample partitions in minutes, after which they can be pooled for downstream analysis pipelines. The GEM barcoded sample information can then be used to map sequencing reads back to their original single cell or single nucleus of origin. The 10X Chromium iX is capable of single cell gene expression, single cell immune profiling, single cell chromatin accessibility, and single cell fixed RNA profiling assays. Also included is a Chromium iX accessory kit and 12-month warranty.

2. Explanation of why the commodity is the only one that meets the needs of the agency:

Mississippi INBRE Imaging Core Facility users have several specific needs for current and future research projects, including gene expression analysis and immune profiling. Many of these projects require sequencing methodologies which are performed at external locations. Preparation of samples for these assays can be challenging and costly. Addition of a single cell immune profiling system to process and prepare sequencing samples is essential to fulfill the experimental goals of researchers. Currently, there is no platform on campus which can barcode samples for single cell sequencing. The 10X Chromium iX system will expand the core's offerings to include this ability, helping to satisfy the needs of facility users. The system is fully automated and can process up to tens of thousands of uniquely addressable partitions in minutes. The speed and throughput of the instrument will benefit users by decreasing hands on time and processing costs while increasing productivity. The ability of the Chromium iX to perform several different types of assays is also valuable, as this flexibility supports the diverse needs of core users. Further, the 10X Genomics Chromium iX will couple with the requested BD FACSMelody Cell Sorter to significantly advance single cell gene expression analysis for USM researchers and those throughout the state of Mississippi.

3. Explanation of why the source is the only source is the only person or entity that can provide the required commodity:

The 10X Genomics Chromium iX Single Cell Immune Profiling system has several exclusive features which make it a uniquely capable instrument. The instrument is able to process thousands of micro-reactions in parallel, encapsulating a sample into tens of thousands of unique partitions. Each partition

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contains an identifying barcode for downstream analysis. This is accomplished using proprietary Next GEM (Gel Beads-in-Emulsion) system. The 10x Next GEM Technology samples a pool of ~3.6 million barcodes to separately index each cell's transcriptome. The system uses gel beads infused with millions of barcoded oligonucleotides which are then mixed with individual cells or nuclei. Gel Beads and samples then create nanoliter-scale GEMs and the sample is barcoded. These barcoded products are pooled for downstream reactions to create short-read sequencer compatible libraries. The barcode information is then used to map reads back to their original single cell or single nucleus of origin. The Next GEM technology is unique to the 10X Genomics, and is essential for effective and efficient single cell gene analysis. Addition of the Chromium iX platform with its patented Next GEM technology will expand the core offerings and research opportunities for Mississippi investigators.

4. Explanation of why the amount to be expended for the commodity is reasonable:

The cost of the 10X Genomics Chromium iX is comparable in cost to other high throughput genomics and sequencing preparation instruments on the market.

5. Efforts that the agency went through to obtain the best possible price for the commodity:

A 24.6% discount off the listed price of the instrument was negotiated with the vendor.

Advertisement Schedule	Date
1st scheduled	6/8/2023
2nd scheduled	6/15/2023

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