**Request for Information (RFI):** **CCDI Molecular Characterization Research Network**

**Notice Number:**

HHS-NIH-NCI-RFI-ETSB-0042-49

**Key Dates:**

Response Due Date: no later than 5PM Eastern Time on July 7, 2023.

**Issued By:**

National Cancer Institute (NCI), Office of Acquisitions (OA)

**General Information:**

This Request for Information (RFI) is intended to provide source material for a Multi-omics Research Characterization Network (MRCN) to support Childhood Cancer Data Initiative (CCDI) studies. The MRCN consists of three components: Genomic Characterization Lab(s), Proteomic Characterization Lab(s), and Metabolomic Characterization Lab(s).

This notice does not obligate the Government to award a contract or otherwise pay for the information provided in response. The Government reserves the right to use information provided by respondents for any purpose deemed necessary and legally appropriate. Any organization responding to this notice should ensure that its response is complete and sufficiently detailed to allow the Government to determine the organization’s qualifications to perform the work.

Respondents are advised that the Government is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted. After a review of the responses received, a pre-solicitation synopsis and solicitation may be published in SAM.gov. However, responses to this notice will not be considered adequate responses to a solicitation.

This RFI is issued for the purpose of providing source materials to assist in formulating the best procurement strategy for a prospective solicitation from the National Cancer Institute.

**Purpose:**

The responses to this RFI may guide the NCI in awarding future contracts at an undetermined time. There is no solicitation available at this time; no basis for claims against NCI shall arise as a result of this RFI, responses thereto or the NCI’s use of such information as either part of our evaluation process or in developing specifications for any subsequent requirement.

This notice is for market research only to make decisions regarding the contract type best suited to provide biospecimen processing for molecular analytes (if needed) and subsequent multi-omics characterization for CCDI. The NCI is interested in determining whether a fixed price type contract utilizing fixed unit prices for services is possible for the task areas outlined below.

**Background:**

The Office of Data Sharing (ODS) of the Center for Biomedical Informatics and Information Technologies (CBIIT) coordinates with relevant NCI programs to support molecular characterization on biospecimens from childhood cancer patients in clinical trials and other studies. Specimen sources may include the Childhood Oncology Group (COG) sites and associated sample processing facilities and other clinical trial sites using different protocols.

**CCDI’s Multi-omics Research Characterization Network** (**MRCN)**

The molecular characterization methods and platforms for consideration may include but are not limited to the following activities at bulk sample, subpopulation of cells, and single-cell/single nuclei level:

* Whole Exome Sequencing (WES)
* Whole Genome Sequencing (WGS)
* Whole Genome Bisulfate Sequencing (WGBS) or Methylation Arrays
* Transcriptome Sequencing (e.g., total RNA-seq, miRNA analysis, and Nanostring)
* Additional Molecular Assays (e.g., circulating cell-free DNA analysis, targeted DNA/RNA sequencing panels)
* Global Proteomics and Phosphoproteomics
* Metabolomics Profiling

Specimens may include fresh frozen tumor biopsy or resected tumor tissue, formalin-fixed paraffin-embedded (FFPE) tissue blocks, bone marrow biopsy, whole blood, plasma, and serum that need extraction and purification, as well as analytes already processed from specimens such as extracted DNAs, RNAs, proteins and metabolites. In addition to characterization of tumor samples, characterization may also need to support germline analysis from normal tissue and/or blood in selected settings.

Anticipated task areas include:

**TASK AREA 1: High-throughput DNA and RNA sequencing**

1. High-throughput DNA Sequencing
2. High-throughput RNA Sequencing
3. Epigenomics with Array- or Sequencing-based Assays
4. Single-Cell/Single-Nuclei Sequencing
5. Additional molecular assays (e.g., circulating tumor DNA sequencing, targeted panels, Nanostring, long read sequencing)

**Task AREA 2: Comprehensive proteomic characterization**

1. Comprehensive global proteomic profiling
2. Comprehensive phosphoproteomic profiling
3. Additional profiling of posttranslational modifications (e.g., acetylation, glycosylation)
4. Single-cell proteomics

**Task AREA 3: Metabolite profiling**

Metabolite profiling including Identification and relative quantification of metabolites and metabolic features.

**NAICS Codes and Size Standards**

In the event a Request for Proposal (RFP) is issued, Task Areas 1,2 and 3 are assigned North American Industry Classification System (NAICS) code 541380 – *Testing Laboratories and Services* which has a size standard of $15,000,000. Task Areas 1,2 and 3 are also assigned NAICS code 493120 – *Refrigerated Warehouse and Storage* which has a size standard of $27,500,000 are being considered. The majority of the work is estimated to be under NAICS 541380.

**Information Requested:**

Please review the Statement of Work (SOW) DRAFT (Attachment 1) and respond to the questions in Attachment 2.

**How to Submit a Response:**

Interested organizations should submit a response to this Request for Information using the Attachment 2 Word document. Brevity, clarity and use of structured format (such as bulleted items) are encouraged whenever applicable to aid in processing and analyses.

No proprietary, classified, confidential, or sensitive information should be included in your response. The Government reserves the right to use any non-proprietary technical information in any resultant solicitation(s).

**Due Date:**Responses are due no later than 5PM Eastern Time on July 7, 2023.

**Number of Copies and Delivery Point:**

All questions must be emailed to Julia Tilton, Contracting Specialist at julia.tilton@nih.gov. A determination by the Government not to compete this requirement based upon responses to this notice is solely within the discretion of the Government.  Please reference number HHS-NIH-NCI-RFI-ETSB-0042-49 on all correspondence.

**Point of Contact:**

Inquiries concerning this Notice may be directed to: Julia Tilton, Contracting Specialist at julia.tilton@nih.gov.