

Posting Date: August 8, 2022

Closing Date: August 18, 2022, 11:30 a.m. ET

Reference Number: 22-040060

To: NCI Bid Board

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

Subject: NCI Bid Board Posting - Detect hemoglobin adducts of polycyclic aromatic hydrocarbons

The National Cancer Institute, Division of Cancer Epidemiology and Genetics Occupational and Environmental Epidemiology Branch (OEEB) conducts studies in the United States and abroad to identify and evaluate environmental and workplace exposures that may be associated with cancer risk. OEEB's mission is to combine epidemiology, quantitative exposure assessment, and molecular components into multi-disciplinary studies to provide insight into cancer etiology, chemical carcinogenesis, and mechanisms of action.

To support the measurement of PAH Hgb adduct levels in 100 red blood samples from the diesel biomarker study, Shanghai Women's Health Study (SWHS) and Shanghai Men's Health Study (SMHS). The Government will benefit from this effort to assess the association between diesel engine exhaust and PAH hemoglobin adducts to provide insight into the etiology of cancer caused by diesel engine exhaust and from this effort to evaluate the range of PAHs Hgb adducts in subgroups of the SWHS and SMHS cohort populations to study associations with cancer.

The National Cancer Institute plans to purchase services that will detect hemoglobin adducts of polycyclic aromatic hydrocarbons from Duke University, Durham, NC. 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 August 18, 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:

The Zhang laboratory in Duke University has unique expertise in the development of assays to measure PAH hemoglobin adducts. This laboratory has developed new highly sensitive, accurate and specific assays to measure PAH Hgb adducts in human red blood cells. Further, this laboratory has previously performed nitro-PAH Hgb adducts content 2 assay in our studies (HHSN261201600765P); as such, it is critical that samples from this new procurement are analyzed by the same lab using the same analytic, QC

and data processing procedures to ensure scientific comparability of the PAH Hgb results with the nitro-PAH Hgb adduct results. This analysis will benefit the U.S. government and the public by providing new information about the etiology of environmentally or occupationally caused lung cancer, which is an important public health concern. Further, we did extensive literature searches (i.e. PubMed and Scopus), and discussed with scientists at national and international meetings. The Zhang laboratory in Duke University is identified as the only contractor that can conduct these types of assays. There is no other contractor able to provide this service.

Attached Documents:

SF18

Statement of Work

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 OF CONSIGNEE	
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 WORK (SOW)

1.0 TITLE

Analysis of hemoglobin (Hgb) adducts of polycyclic aromatic hydrocarbons (PAHs)

2.0 BACKGROUND

Polycyclic aromatic hydrocarbons (PAHs) consist of hundreds of compounds with similar chemical structures and are ubiquitously present in the environment. PAHs are produced as by-products of incomplete combustion of organic materials, including fossil fuels and tobacco, and are found in crude oil and food. Certain PAHs, such as benzo(a)pyrene (BaP), are confirmed carcinogens. PAHs are present in polluted air, so most of the attention has been on inhalation exposure to PAHs in terms of cancer risk assessment. However, PAHs are also present in foods (especially char-grilled meat), making ingestion a potential exposure route. Hence biomonitoring to capture total PAH exposure has been a compelling approach as opposed to measure environmental media concentrations (air, food, etc.). For this reason, urinary metabolites of PAHs have been used as short-term exposure biomarkers in numerous studies.

With a short half-life of within a day, urinary PAHs biomarkers can reflect most recent short-term exposures. A longer-term exposure biomarker, hence, is preferred in cancer cohort studies. In the human body, PAHs are rapidly metabolized, and some metabolites can form adducts with both DNA and proteins. Unless these adducts are repaired, the adducts can lead to mutations in the genome, methylation of promoter sites and contribute to epigenetic modifications that can contribute to cancer risk. In addition to DNA damage, PAH metabolites can also form adducts with proteins in the blood like albumin and hemoglobin³. Both DNA and protein adducts of PAHs have been recommended for use as biomarkers of effect in epidemiological studies. However, protein adducts have several advantages over DNA adducts. The amount of DNA adducts formed, and subsequent mutation and damage, and rate of DNA repair can vary significantly depending on cell type. In contrast, protein (hemoglobin) adducts do not undergo a repair mechanism, avoiding this step as a source of variability. The lifetime of PAH-hemoglobin adducts is estimated to be around 17 weeks. The longer lifetime and the greater abundance in blood have led researchers to postulate that hemoglobin adducts of PAHs would be a biomarker that can capture average PAHs exposure over a relatively long period (3-4 months).

The NCI has conducted prospective cohort studies in Shanghai, China called the Shanghai Women's Health Study (SWHS) and will analyze PAH-Hgb adduct levels in blood samples from these studies to assess the range of PAH-Hgb adducts in blood samples from a subsample of the Shanghai cohort populations for use in studies of lung and other cancers.

2.1 OBJECTIVE

To assay PAH-Hgb adducts in red blood cells to assess exposure to these compounds in a subsample of the Shanghai Women's Health Study.

3.0 SCOPE

The purpose of this procurement is to support assaying PAH-Hgb adduct levels in 100 red blood samples.

STATEMENT OF WORK (SOW)

4.0 CONTRACT REQUIREMENTS/ AND PERSONNEL QUALIFICATIONS

The Contractor shall perform the following tasks:

- 4.1 Apply HPLC- mass spectrometry (LC-MS) technique to analyze PAHs-Hgb adducts in blood samples from in 100 red blood cell samples including QC samples.
- 4.2 Provide lab quality control data including limit of detection (LOD) of each detectable PAH-Hgb adducts.
- 4.3 Prepare a file of blood PAH-Hgb adduct levels and send to the NCI.

5.0 TYPE OF ORDER

This is a firm fixed price purchase order.

6.0 PERIOD OF PERFORMANCE

The period of performance shall be September 1, 2022 to August 31, 2023.

7.0 PLACE OF PERFORMANCE

All work shall be performed at the Contractor's facility at Duke University.

8.0 REPORT(S)/DELIVERABLES AND DELIVERY SCHEDULE

All electronic deliverables shall be submitted for review and comment by the Government's technical point of contact (TPOC), for a review period not to exceed fifteen (15) business days, in accordance with the following deliverables table below:

DELIVERABLE	DELIVERABLE DESCRIPTION / FORMAT REQUIREMENTS	DUE DATE
#1 (Task 4.1)	Analyze blood PAH-Hgb adduct levels in 100 samples	(45) business days prior to purchase order expiration date.
#2 (Task 4.2 – 4.3)	Provide lab quality control data in MS Excel format.	(15) business days prior to purchase order expiration date.
#3 (Task 4.3)	Prepare blood PAH-Hgb adduct level results and send to the NCI in MS Excel format by email	(15) business days prior to purchase order expiration date.

9.0 PAYMENT

STATEMENT OF WORK (SOW)

Payment shall be made once after the deliverables are made. Payment authorization requires submission and approval of invoices to the COR and NIH OFM, in accordance with the attached 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

- 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.*

STATEMENT OF WORK (SOW)

* 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
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.

STATEMENT OF WORK (SOW)

- 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.
- 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.

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

As prescribed in 4.2105(a), insert the following provision:

REPRESENTATION REGARDING CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT (AUG 2019)

(a) Definitions. As used in this provision—

Covered telecommunications equipment or services, Critical technology, and Substantial or essential component have the meanings provided in clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) Prohibition. Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. Contractors are not prohibited from providing—

- (1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
- (2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(c) Representation. The Offeror represents that—

It [] will, [] will not provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation.

(d) Disclosures. If the Offeror has responded affirmatively to the representation in paragraph (c) of this provision, the Offeror shall provide the following information as part of the offer—

- (1) All covered telecommunications equipment and services offered (include brand; model number, such as original equipment manufacturer (OEM) number, manufacturer part number, or wholesaler number; and item description, as applicable);
- (2) Explanation of the proposed use of covered telecommunications equipment and services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b) of this provision;
- (3) For services, the entity providing the covered telecommunications services (include entity name, unique entity identifier, and Commercial and Government Entity (CAGE) code, if known); and
- (4) For equipment, the entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known).

(End of provision)