



SPECIFICATION

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1. Introduction

The UK Health Security Agency (UKHSA) is responsible for protecting every member of every community from the impact of infectious diseases, chemical, biological, radiological and nuclear incidents and other health threats. UKHSA was formed in April 2021.

2. Background

While UKHSA already has the possibly to assess protein changes with the common Western-blot technique, it is limited in terms of the number of proteins that can be assessed in one experiment. Western-blot require a certain amount of sample (tissues or blood) that must be obtained via more invasive methods such as blood withdrawal by a phlebotomist.

UKHSA is currently able to sequence genes and detect gene expression level changes to environmental factors. However, changes in gene expression are not necessarily linked to changes in protein expression. Gene expression changes can take days or more to respond to environmental changes compared to proteins that can directly be affected by toxins or radiations Therefore during an emergency response the protein changes can help to identify which physiological system is the most affected, which system needs priority, and determine new biomarkers for environmental exposures in both acute and long-term incidences.

The four objectives triggering the need for this solution are:

- i. Development of reliable and efficient methods to assess multiple proteins expression using only 1 μ L of sample (including blood equivalent to a simple finger-prick test that can be performed without specialist training).
- ii. Investigation of the effect of environmental agents on brain functions and physiology, and neurological disorders.
- iii. Developing collaborative relationships with academic and private partners as well as clinicians working with human and patients suffering with neurological disorders and/or exposed to environmental agents.
- iv. Providing a quick assessment of protein changes in the blood of persons affected by a radiation or toxicological events for a quick and efficient emergency response.

3. Scope of the Contract

UKHSA is seeking a proteomic solution to identify:-

- Which physiological system is the most affected by radiation or toxicological events
- Which system needs priority,
- and to determine new biomarkers for environmental exposures in both acute and long-term incidences.

The equipment will be used to assess environmental agent effects on the neurologic, metabolism, cardiologic and immune physiology of humans using cell lines, and blood from humans / patients and rodent-model of human diseases.

The equipment must have the scope to assess other physiological functions during an emergency response or for collaborative research projects.

4. Detailed Requirements

Delivery: Equipment to be delivered, assembled (if required) and installed at UKHSA, RCE, Harwell Campus, Didcot, OX110RQ. The Supplier shall provide with its tender the site requirements that are necessary for successful delivery and installation.

Number of proteins to be assessed with 1 µL of blood: At least 40 - 60

Maintenance: Maintenance of the equipment shall be carried out in accordance with manufacturer recommendations and service intervals. Maintenance costs will be billed as and when they occur and the Authority may choose to take out a maintenance contract or pay for repairs and call outs as and when they occur. The Supplier shall provide pricing for both options.

The Supplier will be asked to provide Mean Time Between Failure (MTBF) figures with their tender response.

Management Information Reports: The Supplier shall provide management information reports on a quarterly basis as part of the contract management and review meetings. Such reports shall detail:-

- Schedule services carried out including the detail of the services and the dates
- Call-outs including the detail of the call-outs and the dates
- Mean Time Between Failure figures

The Supplier shall state the typical life time expectancy of the machine with its tender response.

Call out: The Supplier shall respond to any call out requests promptly and in any event within 24 hours of request (or next working day if this falls on a non-working day) .

Security and safety (site visits): Supplier staff will be required to comply with UKHSA security and safety policies and procedures when visiting the site. The Authority shall (where relevant) provide policies, site guidelines/instructions in advance of the Supplier attending the site.

The Authority reserves the right to remove immediately from the site any Supplier staff who do not conform to the reasonable instructions, policies, rules and regulations of the Authority.

Software Licence: Minimum of one year. Options for longer periods to be provided by the Supplier on tender including whether a worldwide, royalty-free, irrevocable, perpetual licence is available for the lifetime of the equipment. Software updates and patches are to be installed on issue.

Training: The Supplier is to provide training to at least two staff (on-site) at UKHSA, RCE, Harwell Campus, Didcot, OX110RQ

Warranty: Minimum of one year. The Supplier shall specify warranty exclusions.

Delivery, Assembly and Installation: The Supplier shall deliver, assemble (if required) and install the equipment at UKHSA, RCE, Harwell Campus, Didcot, OX110RQ. The Supplier shall specify its installation and commissioning process and the supporting paperwork that it will supply. The Supplier and the Authority must be able to sign off the installation acceptance.

Support: Telephone lines open 09:00 – 17:00 hours Monday to Friday

Sustainability: Supplier to indicate typical energy consumption of the equipment as well as details relating to the recycling of parts, disposal of waste and actions the supplier has taken to minimise emissions related to the manufacturing of the equipment.

5. Service Levels and Key Performance Indicators (KPIs)

Equipment: Ability to assess at least 40 proteins at once with only 1 µL of blood (equivalent of a finger-prick) or tissue per plate: KPI: 100%

Performance of Equipment: Achievement of Mean Time Between Failure figures, as supplied by the Supplier in its tender response, to be achieved: KPI: 100%

Maintenance: On-site attendance on agreed scheduled date. Any variation to the scheduled date must be agreed by the Authority: KPI: 100%

Call out support: On-site attendance within 24 hours of request by the Authority (non working days excepted) unless otherwise agreed with the Authority: KPI: 100%

6. Delivery, Assembly, Installation

The site address for delivery, assembly and installation is UKHSA, RCE, Harwell Campus, Didcot, OX110RQ

Where commercial post or couriers service are used, the Supplier will be expected to provide proof of transit if required

7. Contract Management and Review

Contract meetings: once per quarter (virtually e.g. Microsoft Teams)

8. Sustainability

UKHSA fully supports the UK Government's commitment to sustainable procurement. Contracted Suppliers are expected to support the Authority achieve its goals to continuously improve its environmental and sustainability performance. This is to meet statutory requirements, reduce energy use and carbon dioxide emission levels and achieve effective management of water, waste and transport.

The Supplier shall detail typical running costs for the equipment in its tender response (e.g Kw/h electricity consumption).

9. Pricing and Contract Period

Prices submitted within the tender shall be valid for a minimum of 90 days for UKHSA acceptance from date of tender submission. Upon entry into a contract with UKHSA, the pricing submitted by the successful supplier shall be valid for the duration of the Contract Term and any potential extension options stated within the contract.

The contract period will depend on the software licence and maintenance options chosen. However the period will be for a minimum of one year.

The Authority shall have the option to extend the contract period by up to five times on each occasion by up to 12 months.

10. Terms and Conditions

Terms and conditions shall be in accordance with the UKHSA Short Form Contract.

