



***Fundació Hospital Universitari Vall Hebron - Institut de Recerca (VHIR)***

NÚM. EXPEDIENT: 2025-031 DNA AND RNA SEQUENCING (PI23/01045)

**DOCUMENT OF TECHNICAL SPECIFICATIONS  
NOT HARMONIZED TRADE – OPEN PROCEDURE**

**HIRING A SERVICE OF DNA AND RNA SEQUENCING AND SPECIALIZED BIOINFORMATIC ANALYSIS FROM TUMOR SAMPLES AND WHOLE BLOOD IN THE FUNDACIÓ HOSPITAL UNIVERSITARI VALL HEBRON - INSTITUT DE RECERCA (VHIR).**

*Proyecto "PI23/01045", financiado por el Instituto de Salud Carlos III (ISCIII) y cofinanciado por la Unión Europea.*



GOBIERNO  
DE ESPAÑA

MINISTERIO  
DE CIENCIA  
E INNOVACIÓN



Instituto  
de Salud  
Carlos III



Cofinanciado por  
la Unión Europea

## **Clause 1. Aim of the tender**

The object of this tender procedure is the contracting of the service of Next generation sequencing service and data analysis and report including DNA and RNA sequencing from human tumour samples, paired with sequencing of peripheral blood samples as a control sample by the Project PI23/01045 titled "*Plataforma integrativa multiómicica para la identificación de biomarcadores predictivos de respuesta a quimioterapia e inmunoterapia en cáncer de mama triple negativo temprano (PORTRAIT-TNBC)*" of the Fundació Hospital Universitari Vall Hebron - Institut de Recerca (VHIR), funded by Instituto de Salud Carlos III (ISCIII) and co-funded by the European Union.

The PORTRAIT study consists of the multi-omic characterisation of novel and dynamic biomarkers in triple negative breast cancer patients treated with neoadjuvant chemotherapy and immune control drugs. The complete genomic characterisation of these tumour samples requires obtaining next-generation sequencing (NGS) information of tumour DNA and RNA and its comparison with the normal state from peripheral blood samples (DNA). For this purpose, samples of frozen tumours and frozen blood will be sent for DNA and RNA extraction from the very same tumor sample by the service providers.

This tender is not divided into lots because it is related to only one service. This service should be performed and processed by a unique provider as the samples per patient are very limited and all the information must be extracted from the same piece of tissue. We seek a service provider capable of processing tumor-derived material (fresh frozen) for DNA and RNA extraction, followed by next-generation sequencing (NGS) and comprehensive bioinformatic analysis. The service should support broader approaches (WGS, RNA-seq), with robust QC and data interpretation pipelines tailored to oncological research. The information recovered must include a description of the genomic landscape of the tumor, a description of the transcriptome, driver mutations, structural abnormalities, HLA typing, HLA tumor status, neoantigen prediction and immune scape prediction, among other things.

Throughout this specification, the tasks included within the object of this contract are specifically described, as well as the scope of the proposed service.

## **Clause 2. Maximum budget of the tender.**

In the present tender procedure, the maximum tender budget and the estimated value of the contract do not match.

The maximum total budget, corresponding to the total duration of the procedure, is "**ONE HUNDRED SEVENTY-ONE THOUSAND EUROS**" (€ 171.000,00) without VAT, plus "**THIRTY-FIVE THOUSAND NINE HUNDRED TEN EUROS**" (€ 35.910,00) corresponding to VAT, which adds up to the amount of "**TWO HUNDRED SIX THOUSAND NINE HUNDRED TEN EUROS**" (€ 206.910,00).

As detailed below, the provision of services will consist of the sequencing and data analysis of the DNA and RNA extracted from 50 samples.

Therefore, the maximum total budget for each unit of service to be carried out will be:

- **Unit price** for sequencing and data analysis of tumor genomic DNA and normal blood DNA (reference DNA), including extraction, sequencing, data analysis and reporting of the results in a manner valid for routine diagnostic purposes: 2.920,00 euros (VAT excluded)
- **Unit price** for RNA sequencing and reporting from the same piece of tumoral tissue: 500,00 euros (VAT excluded)
- Approximate total units: **50**

The estimated value for this tender is **“TWO HUNDRED FIVE THOUSAND TWO HUNDRED EUROS” (€ 205.200,00)** without VAT, plus **“FORTY-THREE THOUSAND NINETY-TWO EUROS” (€ 43.092,00)** corresponding to VAT, which adds up to the amount of **“TWO HUNDRED FORTY-EIGHT THOUSAND TWO HUNDRED NINETY-TWO EUROS” (€ 248.292,00)**.

Concept	Price (VAT not included)
Maximum budget	171.000,00 euros
Possible modifications	34.200,00 euros
Possible extensions	0,00 euros
<b>Total</b>	<b>205.200,00 euros</b>

In accordance with article 204 of Law 9/2017, it is established the possibility of modifying the contract upwards, and up to 20% of the maximum total tender budget. This amount will be paid to the company in the same way and under the same conditions as regulated in these specifications, upon presentation of the invoice by the successful bidder.

The causes for modification of the contract may be:

- The modification of any of the technical characteristics or the substitution/cancellation of any type of test by the company awarded the contract, without this representing a change in the object of the contract.
- Modification of the technical characteristics required in the research project, such as, for example, increasing the sequencing coverage which would imply the implementation of new library, sequencing, etc. The field of sequencing by massive sequencing techniques is a field in constant change and for this reason it is difficult to foresee what may be the requirements needed in the future.

The cost of the sequencing and data analysis service was estimated based on experience with previous projects and quotations received from several sequencing companies. PORTRAIT project is a multi-omics project that have required set up and standardization,

funded by other sources, of the data produced in order to reach that quality needed for data integration. In the course of this set up process we have tested different sequencing and analysis methods, and we come to the conclusion that data we need has to be on the level necessary for diagnostic purposes.

The estimated value for this tender is financed by PI23/01045 titled “*Plataforma integrativa multiòmica para la identificación de biomarcadores predictivos de respuesta a quimioterapia e inmunoterapia en cáncer de mama triple negativo temprano (PORTRAIT-TNBC)*” of the Fundació Hospital Universitari Vall Hebron - Institut de Recerca (VHIR), funded by Instituto de Salud Carlos III (ISCIII) and co-funded by the European Union.

### **Clause 3. Duration of the contract.**

The duration of the service object of this tender will coincide with the validity of the aforementioned project which is until **31<sup>st</sup> December of 2026**.

The service will start on the day following the formalization of the contract.

However, if this project were to be found, for any unforeseen reasons, subject to the request of a possible extension, the end date will be susceptible to being extended, at most to the one that is finally authorized.

### **Clause 4. Description of the service and scope of the object of the contract.**

#### **Technical specifications:**

#### **1. Sample Processing**

- Requirements for minimal starting material.
- Clear protocols for DNA and RNA extraction from frozen tumor samples.
- QC metrics at each stage (e.g., RIN, DIN, yield, fragment distribution).

#### **2. Library preparation:**

- Information about library preparation protocols
- **Quality control of libraries:** Concentration, molarity, etc.

#### **3. Sequencing:**

NovaSeq technology (standard technology in genomics research) or equivalent is needed for this project. This technology is high-throughput, short-read sequencing suitable for large-scale human genomic studies, including both WGS and RNAseq. Due to its broad adoption, the NovaSeq platform benefits from a mature, optimized ecosystem—ranging from stable reagent supply to extensively validated analysis pipelines and a large user base. This translates into low technical risk, fast troubleshooting, and smooth data integration—critical for the successful execution of the PORTRAIT Project.

Moreover, data reproducibility and comparability must be considered. A significant portion of reference datasets and prior studies were generated using NovaSeq, making it fully compatible with widely accepted bioinformatics pipelines for variant detection, and other state of the art bioinformatics pipelines in oncology research.

### 3.1. Whole-Genome Sequencing (WGS):

- Tumor and matched normal whole-genome sequencing using NovaSeq technology or equivalent with **2x150bp reads** and with a minimum coverage equal to or greater than:
  - **30X** for germline samples (blood).
  - **90X** average depth for tumor samples.

### 3.2. RNA sequencing (RNAseq):

- Ribosomal depletion protocol.
- Sequencing NovaSeq technology or equivalent with **2x150bp reads** and with a minimum of **250M mapped reads**

### 3.3. Quality control of final data:

- Comprehensive quality assessment of sequencing data.

## 4. Delivery of a standardized results report that presents a summary of somatic alterations that may be important for proposing personalized treatment, compatible with clinical interpretation tools:

The report will include:

- Tumor purity estimation.
- Identification of somatic variants:
  - Single nucleotide variants (SNVs).
  - Multi-nucleotide variants (MNVs).
  - Insertions and deletions (indels).
- Detection of driver alterations.
- Prediction of tissue of origin.
- Assessment of homologous recombination deficiency (HRD) status.
- HLA-I typing of the patient and tumor status.
- Annotation pipelines, pathogenicity scoring, and gene-expression quantification.

## 5. Genome alignment and quality analysis (both for WGS and RNAseq):

Delivery of aligned genome data in **.cram** file format

- Delivery of raw sequencing data in **.fastq** format.
- Quality assurance with at least **85% of reads achieving Q30** or higher.

## 6. Sample replacement policy:

- Free replacement of samples if:

- Insufficient sequencing output for DNA sequencing (<300Gb).
- Quality standards (Q30) are not met.

#### 7. Data delivery:

Data will be delivered via **FTP or Google-Cloud platform at no additional cost.**

#### 8. Exclusions:

Sample shipment costs are not included.

Shipment costs for recovery of remaining materials are not included.

#### 9. Remaining material:

Remaining material, DNA and RNA, must be retained and made available upon request.

#### 10. Turn-around-time:

Results including full report on genomic landscape and transcriptome should be ready in 30 days after the reception of the samples by the provider.

### Clause 5. Location and work time.

Location: The bidder will have to provide the service object of this tender in its own facilities, which must have the technology and personnel necessary.

Work time: The schedule will be determined by the center where the service is provided.

### Clause 6. Billing and payment.

According to Law 25/2013, of December 27, 2013, on the promotion of electronic invoicing and the creation of the accounting registry of invoices in the Public Sector, in its Article 4, *"All suppliers who have delivered goods or provided services to the public administration may issue and send electronic invoices. In any case, they will be obliged to use the electronic invoice and to submit it through the corresponding general entry point..."*.

The awarded company will invoice electronically the services actually performed. The DIR3 codes to be able to issue the invoice are the following:

DIR3	ACCOUNTING OFFICE	DIR3	MANAGING BODY	DIR3	PROCESSING UNIT
<b>A09006467</b>	Fundació Hospital Universitari Vall d'Hebron-Institut	<b>A09006467</b>	Fundació Hospital Universitari Vall d'Hebron-Institut	<b>A09006467</b>	Fundació Hospital Universitari Vall d'Hebron-Institut

	de Recerca (HUVH IR)		de Recerca (HUVH IR)		de Recerca (HUVH IR)
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The invoice will be issued for each batch of samples. In no case will the maximum amount be binding on the VHIR, but only the supply and service actually provided will be paid based on the prices finally awarded.

Each invoice issued must detail the period to which it corresponds, the breakdown/description of expenses by concept and the internal account that should be charged, as well as indicate the references “**L 2025-031**”.

In the event that the issuance of the electronic invoice is not feasible for exceptional reasons, the contractor will invoice each service rendered through its corresponding invoice, which must be sent to the following e-mail address: [factures@vhir.org](mailto:factures@vhir.org)

The effective payment of the executed services will be performed by bank transfer, due 30 days / invoice date.

The contracting institution will make the payment of the supplies once they have been fully performed and once the invoice has been entered into its registry. In accordance with this paragraph, advance payment of part or all of the contract price is not contemplated.

In no case, the contractor will have the right to the revision of prices pertaining to any concept.

Therefore, the contracting entity will make the payment of the invoices using the currency conversion according to the common practices that the entity carries out in this type of case, so said payment will be made at the time of payment of the invoice.

The VHIR's fiscal data that must be included in the invoice are the following:

FUNDACIÓ HOSPITAL UNIVERSITARI VALL D'HEBRON - INSTITUT DE RECERCA  
VAT: G-60594009  
Passeig Vall d'Hebron, 119-129  
08035 Barcelona

In the event that the invoice is not issued in accordance with the criteria established and referenced at the beginning of this clause, payment will not be made and the invoice will be withheld until the requested data is correctly indicated.

In the case of electronic invoicing, this will be rejected until the requested data is correctly indicated.



Once the contract ends, including any extensions that may be executed, VHIR will only accept invoices issued after the end of the contract as long as the period of execution of the same is within the term of the tender.

In the event that the invoice is issued after the end of the contract and in accordance with the above paragraph, VHIR will only pay invoices issued within two (2) months after the end of the contract.

The VHIR will only pay the successful bidder for the services actually provided, without, in any case, the VHIR being obliged to exhaust the estimated value of the contract/bid budget.

### **Clause 7. Responsible for the contract.**

The person in charge of the contract will be Dr. Ana Mafalda Antunes de Melo Oliveira, Clinical Research Scientist and Medical Oncologist in the Breast Cancer Group at VHIO of the Fundació Hospital Universitari Vall d'Hebron - Institut de Recerca and IP of the Project PI23/01045, who will basically have the functions of management and supervision of the contracts and the billing; follow-up, control and provide instructions for the good execution of the agreements; determine whether the performance conforms to the prescriptions established for its execution, reception of the order after its completion and comply with the obligations assumed by VHIR

### **Clause 8. Confidentiality, Protection of personal data and Intellectual and Industrial Property**

Notwithstanding the provisions of the current legislation on intellectual property, protection of personal data and confidentiality, the companies awarded in this call for tenders will expressly commit to not giving the information and / or data provided by VHIR, or any use not provided in this bidding document, and / or expressly authorized by the Head of the Research Grants Office.

The company that awards the contract derived from this bidding will have to extend to their employees the obligations assumed by the awarded company, regarding confidentiality, intellectual property and protection of data.

All rights worldwide will be exclusively granted to VHIR for the maximum time established in applicable laws and / or international treaties for their exploitation through any format and / or exploitation modality, including the exploitation of any discovery, invention, creation, work, procedure, idea, technique, drawing, design, image or any other intellectual or industrial property right generated, raised or acquired as a consequence of the work carried out by the contracting company (hereinafter "Intellectual Property and / or Industrial"), which derives directly or indirectly from the relationship between VHIR and the company awarded in this tender procedure.



The awarded company must inform VHIR of any discovery, creation, invention, idea or any other element that constitutes or is likely to constitute a right of Industrial and / or Intellectual Property partially or totally developed during the contract period.

In the event that the awarded company discovers or develops any creation of intellectual or industrial property, it will be understood that the discovery or development constitutes confidential information of VHIR.

The awarded company must sign all those public and / or private documents that are necessary, in VHIR's discretion, to allow the accreditation of the ownership of VHIR or the proper protection of the aforementioned Intellectual Property and / or Industrial rights in favor of VHIR or of any designated third party.

The awarded company authorizes VHIR to transform, modify, publish, communicate and exploit the work resulting from the execution of the contract derived from this tender procedure.

## **Clause 9. Allocation criteria**

The following criteria and percentage points will be used to evaluate the tender proposals and determine the most economically advantageous one:

<b>1. Criteria that can be assessed through automatic formula</b>	<b>Maximum 70 points</b>
- Economic Offer	Maximum 56 points
- Automatic Evaluation Criteria	Maximum 14 points
<b>2. Criteria that can be assessed through value judgments</b>	<b>Maximum 30 points</b>

### **9.1 Criteria that can be assessed through automatic formula..... up to 70 points**

The following criteria will be evaluated by automatic formula. The award criteria for assessing the contents of Envelope 3 are as follows:

#### **9.1.1 FINANCIAL OFFER.....up to 56 points**

It will be valued automatically, in accordance with the following formula:

$$P_v = \left[ 1 - \left( \frac{O_v - O_m}{IL} \right) x \left( \frac{1}{VP} \right) \right] x P$$

$P_v$  = Bid Score to Rate

P = Economic criteria points

$O_m$  = Best Offer

$O_v$  = Offer to be Valued

IL= Bid Amount

VP= Weighting Value = 1

The formula will be applied to the value resulting from the following:

- 1) Multiply each unit price offered by the number of samples, which is 50.
- 2) Sum the amount of the previous multiplications.

\* If after applying the automatic formula to a submitted bid, the resulting value is negative, you will be directly assigned zero (0) points of the economic part.

### 9.1.2 AUTOMÁTIC EVALUATION CRITERIA.....up to 14 points

The bidders shall mark the automatic evaluation criteria in Annex No. 1 of the PCAP, which they must provide in [Envelope 3](#):

- Quality control of the samples by shallow sequencing before full whole genome sequencing..... 05 points
- Allow small batches of samples (minimum of 2 samples per batch) to be sent ..... 05 points
- Turn-around-time of results shorter than 30 days from the reception of the samples..... up to 04 points

It will be assessed as follows:

- Turn-around-time of results 23 to 29 days..... 01 point
- Turn-around-time of results 16 to 22 days..... 02 points
- Turn-around-time of results 15 days or shorter ..... 04 points

### 9.2. Criteria that can be assessed through [value judgments](#)..... up to 30 points.

The following criteria can be assessed through value judgments. The value will be done in compared with the tenders submitted. The highest score will be given to the offer that best fits the technical requirements set out in this document. All other bids will be scored proportionally by comparison. Subsequently, the various proposals evaluated in descending order will be sorted out, and the following formula will be applied to obtain the score,

$$P_{op} = P \times \frac{VT_{op}}{VT_{mv}}$$

$P_{op}$ = Score the offer to value

$P$ = Criteria score

$VT_{op}$ = Technical evaluation of the scored offer

$VT_{mv}$ = Technical evaluation of the best scored offer

The following criteria will be evaluated by value judgments. The award criteria for assessing the contents of [Envelope 2](#) are as follows:

### 9.2.1 Drafting of work proposal.....(up to 30 points)

The work proposal submitted by the bidders must include at least the following points:

- Detailed report on DNA and RNA sample processing and analysis (quality and quantity)..... up to 10 points  
The following should be specified: QC Results Summary, etc.
- Detailed report on data analysis..... up to 20 points  
The following should include an outline of the pipeline and details about the tumor characteristics analysed.

In order to apply the formula set out in Directive 1/2020 on the Application of Formulas for the Evaluation and Scoring of Economic and Technical Proposals, the threshold for each criterion and sub-criterion proposed to be evaluated and subsequently scored is as follows. Therefore, the minimum scores for each sub-criteria in order to apply the formula will be:

- Detailed report on DNA and RNA sample processing and analysis (quality and quantity) (5 points)
- Detailed report on data analysis (10 points)

There are two possible options regarding the function of this threshold, depending on whether none of the bids exceeds it (option 1) or at least one of the technical bids exceeds it (option 2).

- Option 1 - If the evaluation of the bids exceeds the minimum evaluation threshold, all of them obtain as a score the value obtained in the evaluation phase and no bid is excluded from the tender.
- Option 2- If any of the bids exceed the threshold, all the bids are scored and no bid is excluded from the scoring phase, nor from the tender.

In the event that only one tendering company applies for the tendering procedure, the formula presented in the technical aspects will not be applicable for this company, the results obtained after the subjective assessment by the responsible person will be sufficient.

**IMPORTANT NOTE:** In order to be awarded the contract, the tenderer must obtain at least **fifteen (15) points** in the proposal relating to the criteria quantifiable according to value judgements. Otherwise it will be excluded.

Barcelona, 16<sup>th</sup> of July of 2025.

**CONTRACTING ORGANISM**

**Mrs. Montserrat Gimenez Prous**

Manager

Fundació Hospital Universitari Vall Hebron - Institut de Recerca (VHIR)