

Towards Cancer Mission in Horizon Europe

Understanding Cancer: Creating Oncology-focused Living Labs to Accelerate innovation and implementation of new technologies

I. SCOPE

Lack and/or scattering of appropriate models and data availability hampers understanding and clinical translation in cancer. Our scope is to digitally combine the knowledge and technology included in the CIBER areas to build cross-cutting partnerships in cancer research to accelerate the pace of clinically relevant discoveries in cancer. This scope will encompass different areas of knowledge of CIBER as well as public/private partnerships. This call is not intended to produce answers to scientific questions – other than preliminary or proof-of-concept results – in itself, but to generate the alignment required for the research community to address those questions.

II. EXPECTED IMPACT

Living Labs are defined as user-centered, open innovation ecosystems based on a systematic user co-creation approach integrating research and innovation processes in real life communities and settings. Living labs are then supposed to overcome traditionally “compartmentalized approaches” among knowledge areas. We want to use this concept to work towards an organized integration of clinical and preclinical data existing in CIBERONC groups aligned with European partner organizations that will allow collaborations at a cross-European level and will place CIBERONC in the European map of Oncology/Hematology research.

The immediate expected impact is to bring together relevant partners in the area of preclinical and clinical cancer research and take advantage of the potential synergies that exist between the area of Cancer (CIBERONC) and the area of Biotechnology (CIBER-BBN). Other CIBER areas could also be invited. Additionally, experience in existing collaborations with other national/ EU partners and research infrastructures (RI) that may provide previous successful proofs-of-concepts/ (sharing) tools will be considered. The aim is to identify and promote future leadership

of intra-CIBERONC/ CIBERONC-CIBER-BBN Living Labs/ accelerators at a broader level, in alignment with the EU Mission of Cancer.

Importantly, the Carlos III Health Institute of the Biobanks and Biomodels platform and specially the CIBERONC Work Modules represent highly valuable resources to improve understanding of cancer, which must be aligned with the previously mentioned actors.

The final aim of the proposals should be to make available to researchers several longitudinal cohorts of patients, together with their primary neoplasm samples/clinical data. Collaboration of CIBERONC with the scientists of CIBER-BBN is required for the development of, among others, the following issues; (i) artificial intelligence-based and big data techniques for data mining, (ii) improving cancer diagnosis with imaging technologies with enhanced features, signal analysis and processing systems, (iii) discovery of new biomarkers, (iv) in vitro diagnostic technologies based on microelectronic and nanoparticles to provide multiplexed easy-to-use or point-of-care devices or automated lab-on-a chip, (v) new therapeutic strategies aiming at increasing the bioavailability, protecting biopharmaceuticals from biodegradation, targeting or programming drug release, by using nanosystems, (vi) generation of organoid models, as well as the preparation and 3D printing of cell models of human tumors, including testing of new biomaterials, ready to test new antitumor compounds

Our initial focus will complement and take advantage of the IMPACT project that will organize a Genomic integrative platform. The successful projects should be innovative and the most integrative in terms of existing infrastructure, expertise and technologies across programs of CIBERONC, CIBERBBN and other areas of CIBER.

To overcome obstacles to innovation, to improve healthcare delivery in our country, and make life-changing solutions possible, our medium-term expected impact is the creation of a Living Labs in our country taking advantage of the CIBER structure, which can serve as innovation hubs, encompassing biotech SMEs, pharma companies, biobanks and hospitals, and creating high-quality new jobs. This will ultimately contribute to the understanding and cure of cancer.

III. FUNDING

The budget available for this call is 180.000€. For this call, 2 projects of 90,000€ or 1 project of 180.000€ will be funded. This funding will be managed by CIBER and the CIBERONC PI leader of the proposal will access and execute the funds *via* the intranet.

IV. ELIGIBLE COSTS

The expected actions that can be funded within this call include personnel, travel expenses, meeting organization, subcontracting, equipment, infrastructure and other goods and services.

Please consider that the costs must:

- Be included in the budget detailed in the proposal
- Be incurred by the CIBERONC members of the team work
- Be directly related to the action that is being funded
- Be incurred in the project period
- Be verifiable
- Be appropriately justified in the justification process
- Be managed via the CIBER intranet and directly by the project leader

V. DURATION OF THE PROJECTS

The projects will have a duration of 1 year, from the resolution of the call. Extension for a second year will be possible depending on the area budget for 2021/2022 and the development of the proposal. A dedicated panel will evaluate the proposal after one year if an extension is requested.

VI. ELIGIBILITY CRITERIA

Each project will have an associated work team, which will be led by a full member of CIBERONC (IP, adscrito o contratado).

The work team must be composed of at least four research groups of CIBERONC, each from a different scientific program. There is no maximum limit to the number of groups that can integrate a work team and several groups can belong to the same program. Collaborations with CIBER-BBN is required. Additionally, the application may include as many collaborations from other CIBER areas as considered necessary to develop the proposal.

Every proposal will be led by one coordinator. Every CIBER group will be represented by a researcher, that must be as well a full CIBER member (IP, adscrito o contratado).

A CIBERONC researcher can be coordinator of only one proposal, although participation in other applications as part of the work team is possible.

VII. APPLICATION PROCESS

Applications should be submitted using the template provided in Word format, and available on the CIBERONC website. The application form must be completed in English and is limited to 6 pages.

Applications should be sent by e-mail to proyectos@ciberonc.es, indicating "Acciones Estratégicas_CIBERONC 2021" in the subject line.

The deadline for submission of applications is open from the date of publication of this call on the website www.ciberonc.es until March 17th, 2021 at 23:59h.

VIII. EVALUATION OF THE PROPOSALS

Applications submitted according to the procedure and in due time will be evaluated by a dedicated selection panel. The selection panel will be composed by one or more members of the following bodies:

- Steering Committee of CIBERONC
- Scientific Direction of CIBERONC
- Steering Committee of CIBER-BBN

The three best proposals will be assessed externally by one or more members of the following bodies:

- ESAC, External Scientific Advisory Committee of CIBERONC
- CAIC, Comité Asesor de Investigación Clínica of CIBERONC
- External experts in the field of cancer closely related and with wide knowledge of CIBERONC

After the evaluation of all applications and taking into account the available budget, a resolution will be issued and will be made available on CIBERONC website, before March 30th, 2021, establishing a period of 5 working days for correction and amendment of applications. If the applicant does not complete the documentation or does not remedy the deficiencies within the period granted, the application will be considered not eligible. Additional information can be requested to the PI of the proposal during the evaluation process if considered necessary by the evaluation bodies.

In the event that there is not sufficient budget to finance all the applications, these will be prioritized by the evaluation committee. In this situation, the following aspects will be evaluated:

- Scientific excellence and impact of the proposal, (40%).
- Coherence of the work team (CIBER partners involved and adequacy of their profiles). Preclinical and clinical integration in the proposal, (20%).
- Transversality of the project (within CIBERONC, with other areas and with relevant national and international established partners), (20%).
- Eligibility of the proposal in external competitive calls. Alignment with the EU Mission of Cancer, (20%).

The evaluation committee reserves the right to declare this call void in view of the applications received.

VIII. TECHNICAL AND FINANCIAL JUSTIFICATION OF THE GRANT

The justification of the financial aid will be carried out, using the model available on the web page, within a maximum period of 2 months after the end of the project, by providing all necessary information to CIBERONC by e-mail to proyectos@ciberonc.es. It will be necessary to present a report on the results of the project that includes a scientific and economic report according to the template provided.

In case of non-compliance with the action financed or partial or total dissolution of the collaborative project, the action will be evaluated by the Selection Panel that evaluated the application funded. They will decide on possible refunds of the economic allocations received depending on the tasks carried out and the activities still needed to be developed at that time.

In the case that not all funds allocated for the project are fully executed during the time for the project, CIBERONC reserves the right to recover those funds.

IX. OBLIGATIONS OF THE BENEFICIARIES

The beneficiaries of these grants are obliged to:

- To use the aid for the purpose for which it was granted.
- Documentary justification of the aid received within the deadlines set forth in the call for applications.

IX. DISSEMINATION

CIBERONC reserves the right to disseminate, in its report and in other communications, a general description of the tasks carried out during the action that is object of this grant.

X. INTELLECTUAL PROPERTY

Background

If the project is based on a patent or any other kind of invention of which CIBER is not a co-owner, it must be reflected in the proposal.

If databases, human probes or biological material from different entities from where the group(s) belong(s) are going to be used, it must be reflected in the proposal.

This will not be an evaluable reason, it is only for administrative matters.

Results.

In the case the projects granted will obtained exploitable results, the ownership of them will belong to CIBER and to the Consortium entities, following the Spanish Patent Law and the seventh clause of CIBER's *convenio marco de consorcio*. The funding granted in this Call will be taken into account in order to determine the percentage of CIBER. A case-by-case agreement will be signed for its regulation.