

EXECUTIVE SUMMARY OF THE BST R&D&I STRATEGIC PLAN 2017-2020

This PER 2017-2020, 10 years after the first strategic plan of research in the BST, is the result of an updated review of the environment of health research, mainly public, of the analysis of the internal situation of the BST from objective indicators and a participatory strategic reflection.

The main conclusions of this process are shown below:

In relation to the environment:

- ✘ The health sciences and especially the activity around health care are one of the most important engines of the economy of the developed countries. Its scientific evolution has taken place in parallel generating an intense productive activity.
- ✘ Catalonia has established itself as an outstanding and competitive bio-cluster that concentrates a large number of research centres, universities, science parks, hospitals and biotechnology industries with a competitive scientific and technological production at an international level. Currently, Catalonia generates almost 1% of world scientific production.
- ✘ In relation to clinical research, Barcelona and by extension Catalonia, is positioning itself as another attractive cluster at the international level for conducting quality clinical trials.
- ✘ In the public sphere of research, the promotion of translational research with specific programs of the EU, the State and the Generalitat de Catalunya, such as Horizon 2020, the "State Plan for Scientific, Technical and Innovation Research" (Managed by the Carlos III Health Institute) and the Generalitat de Catalunya's Strategic Health R&D&I Plan 2016-20 (PERIS), is quite outstanding.
- ✘ In Catalonia, the CERCA Centres together with the SUMA program are crucial elements for the strategic development of health research in the Generalitat de Catalunya, highlighting the number, quality and productivity of its institutions. The BST maintains close institutional relationships with several of these research structures, which will facilitate the development of collaborative R&D&I projects.
- ✘ The effects of the economic crisis have been felt at all levels. However, Catalonia has maintained a relative level of R&D&I spending above the national average, only surpassed by Navarre and the Basque Country.

In relation to relevant institutions in the area of knowledge of the BST:

The BST has achieved a dimension and characteristics in which the references are necessarily international. In this regard, the Central Blood Banks of the Netherlands, Canada, Scotland, Australia and the United Kingdom, among others, are the benchmarks for R&D&I activities.

- ✘ All of them come from processes of concentration similar to those that the BST has carried out, some of them with many years of anticipation, becoming examples of excellence.
- ✘ In spite of our relative youth in the current model, the evolution of our programs, research projects, their financing and, in summary, the R&D&I strategy used is consistent with the trajectory of these examples of excellence and with the needs of our environment.

In relation to the internal situation of the BST:

- ✘ The BST has outstanding professionals with remarkable research potential in their areas of knowledge. Its scientific and innovation production, in many cases, is compromised by the lack of time to develop it more effectively.
- ✘ In recent years, the BST has allocated an increasing amount of own funds to R&D&I, reaching a cumulative amount of almost € 25 million since 2006. These funds have allowed, among others, the development of the Advanced Therapies Division and progressively fund more intensively research from other BST divisions.
- ✘ In spite of this, the critical mass, research capacity and quality of research teams must be increased in order to improve scientific productivity, harness the strengths and capacities of the relationship to jointly gain scientific and technical competitiveness.

Taking these aspects into account, in addition to internal and external in-depth analysis, **the STRATEGIC PLAN 2017-20 is based on a renewed mission and vision:**

Mission

Integrate the internal and external knowledge of the areas of expertise of the BST to develop medicinal products of human origin, technologies and services that respond to the needs of society and that impact on the usual clinical practice, ensuring their quality, biological safety, ethical and regulatory.

Vision

To become a national and international reference in R&D&I in the field of activity of the BST, making it possible to have an impact on medical practice.

To achieve this you will need:

- ✘ A consolidated, motivated and cohesive staff of full-time or part-time research staff
- ✘ A support structure with clear leadership, coordinating, channelling and aligned with the strategic lines of the BST and the technological advances

With 2 axes or main objectives:

Alignment and translation to society:

Aimed at improving the alignment of R&D&I with the company's strategic objectives and improving its effectiveness, with an emphasis on translating its results to society.

To achieve this objective, strategic actions are proposed:

- ✘ Definition and consolidation of priority lines and research areas in the BST
- ✘ Promote a R&D&I program in donation of blood, cells and tissues that contributes to ensure the satisfaction of the demand of our products in the long term
- ✘ To foster the translational development of processes, products and services that sustainably improve the quality of life of patients and, at the same time, generate competitive scientific production
- ✘ To promote research in the biological safety assurance of all products donated and produced in the BST

Improving competitiveness and scientific impact

With the aim of advancing the BST towards its conception as "knowledge company" and, as a consequence, to improve its scientific competitiveness and its presence and positive influence in the scientific and academic forums of its field of activity.

In this sense, the following strategic actions are defined:

- ✘ Ensure compliance with the strategy and sustainability of R&D&I by capturing talent and by "growing" knowledge-generating professionals by improving their institutional link
- ✘ Ensure core resources and sufficient administrative and technical services to support research
- ✘ To improve the impact and institutional visibility of the BST in relation to its areas of knowledge, intensifying alliances and collaborations with reference centres and academic leaders, promoting joint scientific production.

One of the changes in relation to previous stages has been the **definition of research programs and their priority lines** with their respective managers. These are:

At the vertical level:

- ✘ **Hemotherapy (HT):** Immunohematology, Transfusion, Molecular diagnosis, Process development (Dr. Eduardo Muñiz)
- ✘ **Tissue Bank (BT):** Development of products and processes of the tissue bank. Regenerative Medicine (Dr. Ricardo Casaroli)
- ✘ **Cell Therapy (CT):** Immunobiology of transplants / Immunotherapy. Regenerative Medicine (Dr. Sergi Querol)

And at a transversal level to the whole organization:

- ✘ **Biological Safety (SB):** Emerging pathogens, epidemiology, product harmonization, bio-surveillance, pharmacovigilance, haemovigilance (Dr. Silvia Sauleda)
- ✘ **Donation (Do):** donation, ethics and promotion of donation, protection, welfare and comfort of the donor (Mrs. Aurora Masip)

In order to manage, promote, follow up and evaluate the present PER, the following actions have been carried out:

- ✘ The functional organization of R+D+i in the BST has been reviewed
- ✘ An Internal Scientific Committee has been set up and its functions defined
- ✘ The working groups of each program have been defined
- ✘ A calendar of actions has been formulated for 2017 and beyond
- ✘ The algorithms and selection criteria for projects that are candidates for internal financing have been defined
- ✘ An External Scientific Committee has been proposed
- ✘ The strategic indicators to be achieved at the end of this plan have been defined

Note:

This document has been prepared by the Scientific and Research Director of the BST (Joan García), Eli Tahull (Area of Innovation and Projects), Ricardo Casaroli (Tissue Bank) Ruth Coll (Clinical Development), Francisco Rudilla (Immunology) and Joaquim Vives (Cell Therapy)

The main resources consulted for its elaboration have been:

- ✘ PEI 2006-2010 (prepared by the first Scientific Director, Dr. Ricardo Pujol Borrell)
- ✘ PEI 2013-2015 (prepared by the previous Scientific Director, Dr. Jordi Sierra)
- ✘ Biocat 2015 Report
- ✘ Web pages of the Carlos III Health Institute, of the CERCA Institution, the Canadian Blood Services, Australian Red Cross Blood Service, Scottish Blood Services, NHS Blood and Transplant (NHSBT)
- ✘ Integration Program of Centers CERCA (SUMA)
- ✘ EU Horizon 2020 Program
- ✘ Cotec 2015 report
- ✘ State plan for scientific and technical research and innovation 2013-2016
- ✘ Strategic Plan for Research and Innovation in Health 2016-2020 of the Health Department of the Generalitat de Catalunya.