

MILenARI Project

What about MILenARI project?

CAR T-cell therapy is one of the most promising advances in cancer treatment today, based on the use of the patient's own immune system to fight cancer. First, the patient's blood cells are collected, modified in the laboratory to recognize and destroy cancer cells, and finally re injected into the patient's bloodstream. Offering a powerful and personalized treatment option. For many patients with certain blood cancers or rare diseases, CAR-T therapy has been life-changing, providing hope where other treatments have failed.

However, this therapy is not widely available. Its production is complex and expensive, and most manufacturing is centralized in a few facilities, making access difficult for patients in many countries. This is where the **MILenARI (Mediterranean International Lentivirus ARI) project** comes in. Coordinated by IDIBAPS, with the participation of American University of Beirut, King Hussein Cancer Center and Bambino Gesù Children Hospital, and funded by the European Union through the Interreg NEXT MED programme, MILenARI aims to make CAR-T therapy more accessible across the Mediterranean region. The project, which began on October 24, 2025 and has a duration of 3 years, focuses on scaling up the production of lentiviral vectors -essential tools for creating CAR-T cells- and sharing this technology with partner countries in Italy, Lebanon, and Jordan. By decentralizing production and building local capacity, MILenARI seeks to break down barriers and bring this cutting-edge treatment closer to patients who need it most. Ultimately, the project is about saving lives and reducing inequalities in access to advanced cancer therapies.

You can consult all the information on their website: <https://www.interregnextmed.eu/project-page/milenari/about/>

What is the goal of the project?

The main goal of MILenARI is to transform CAR-T therapy from an exclusive treatment into one that is accessible to patients across the Mediterranean. To achieve this, the project will significantly increase the production of lentiviral vectors in Spain, ensuring a reliable supply for CAR-T manufacturing. This technology and expertise will then be transferred to partner



institutions in Italy, Lebanon, and Jordan, enabling them to develop their own capacity for producing CAR-T cells locally.

Beyond production, MILenARI aims to create a collaborative network of researchers, clinicians, and healthcare providers who will work together to improve treatment options for cancer and rare diseases. The project also focuses on preparing the regulatory groundwork for future international clinical trials, starting with pediatric patients suffering from acute lymphoblastic leukemia -a condition where CAR-T therapy can be life-saving. By decentralizing production and fostering knowledge exchange, MILenARI seeks to reduce costs, accelerate innovation, and ensure that advanced therapies are not limited to wealthy countries but become a reality for patients throughout the region.

What results are expected?

By the end of the project, MILenARI expects to deliver a tangible impact on healthcare accessibility and innovation. Patients in Spain, Italy, Lebanon, and Jordan will benefit from improved access to CAR-T therapy, offering new hope for those battling aggressive cancers or rare diseases with no alternative treatments. The project will establish a decentralized production model, making CAR-T manufacturing more efficient and sustainable, and reducing the dependency on a few centralized facilities.

In addition, MILenARI will strengthen collaboration among academic centers, hospitals, and industry partners, creating a foundation for future clinical trials and regulatory approvals. This will not only accelerate the adoption of CAR-T therapy but also enhance research and development capacities in Mediterranean Partner Countries, promoting social inclusion and reducing healthcare disparities. Ultimately, MILenARI aims to reshape the landscape of advanced therapies in the region, paving the way for a future where cutting-edge treatments are available to all patients, regardless of where they live.

Project partners

- Spain: **Research Foundation Clínic Barcelona-August Pi i Sunyer Biomedical Research Institute** (Lead Partner) <https://www.clinicbarcelona.org/en/idibaps>



- Spain: **Hospital Clinic of Barcelona** <https://www.clinicbarcelona.org/en>
- Lebanon: **American University of Beirut** www.aub.edu.lb
- Jordan: **King Hussein Cancer Center** www.khcc.jo
- Italy: **Bambino Gesù Children Hospital** <https://www.ospedalebambinogesu.it/>

Financial support received from European Union

The project includes a total financing of €2,498,88.15, 89% of which is covered by the European Union.

