

# Almirall, Barcelona Supercomputing Center (BSC) and Nostrum Biodiscovery collaborate to seek new therapies through AI

- The partnership aims to improve the design of protein-protein modulators through Artificial Intelligence to identify new therapeutic approaches for the treatment of skin diseases
- The project received funding from the Spanish Ministry of Science and Innovation as part of the EU-funded Recovery, Transformation and Resilience Plan

**BARCELONA, Spain. 5<sup>th</sup> December, 2023 – Almirall S.A. (BME: ALM)**, a global pharmaceutical company focused on medical dermatology, today announced a **new collaboration with the Barcelona Supercomputing Center-Centro Nacional de Supercomputación (BSC-CNS) and Nostrum Biodiscovery (BSC's first spin-off) to explore artificial intelligence (AI) and machine learning (ML) generative approaches to design new protein-protein modulators** that will be the basis of new therapies for dermatological diseases.

The collaboration, named ARTIBAND, will extend over a three-year period. Initially, the technology will be developed and trained with data on the public domain. In a second phase, it will be further optimized and applied to the discovery of new protein-protein modulators of Almirall's interest. The project received funding from the Spanish Ministry of Science and Innovation as part of the EU-funded Recovery, Transformation and Resilience Plan.

*"This new collaboration with BSC and Nostrum Biodiscovery marks a further step in our artificial intelligence and medical dermatology journey. Applying AI to protein-protein modulator design not only discovers new therapeutic approaches but also fundamentally reshapes how we tackle and solve dermatological challenges. This endeavor represents a bold step forward in our commitment to improving lives through groundbreaking research and innovation,"* stated **Francesc Fernández, Almirall's Data Science Director.**

Almirall and Barcelona Supercomputing Center (BSC) have been collaborating since 2018 in the research program SilicoDerm, a project focused on computational drug design applied to dermatological therapeutic targets. Silicoderm has been the starting point of AI-based tools for drug discovery. *"This collaboration, backed by cutting-edge generative artificial intelligence and machine learning, opens new avenues to advance dermatology research. At BSC, we are dedicated to harnessing the power of supercomputing and AI for the greater good, and this partnership exemplifies our commitment to pushing the boundaries of scientific discovery,"* noted **Víctor Guallar, Barcelona Supercomputing Center's Chief Scientific Officer.**

*"As a spin-off from the Barcelona Supercomputing Center, we look forward to bringing our expertise in AI-based drug discovery to this transformative collaboration with Almirall. Together, we aim to revolutionize the treatment landscape for dermatological diseases. Our innovative approach, underpinned by generative AI, has the potential to uncover new therapeutic possibilities that can have a significant impact on patients' lives,"* said **Alexis Molina, Nostrum Biodiscovery's Director of Artificial Intelligence.**

## Almirall's investment in generative AI

The application of generative artificial intelligence methods in the pharmaceutical sector is at an early stage but has great potential. One of the most promising areas of artificial intelligence and machine learning is generative

chemical modelling. AI platforms are first trained with a huge amount of chemical data for an algorithm to "learn the chemical language". Once this is done, generative algorithms can propose new chemical materials based on the learned language model. In this way, the generative model proposes compounds that are different and could be complementary to those found in compound libraries and which are biased on demand.

In November 2023, Almirall announced its first collaboration in the field of AI-generated medicines. The agreement aims to collaborate on the discovery, development, and commercialization of AI-generated therapies to treat chronic and debilitating dermatological diseases. The collaboration represents a further step in the development of AI-generated drugs and the design of life-transforming medicines for people suffering from skin diseases.

### About Almirall

Almirall is a global pharmaceutical company focused on medical dermatology. We collaborate with scientists and healthcare professionals to address patients' needs through science to improve their lives. Our Noble Purpose is at the core of our work: "Transform the patients' world by helping them realize their hopes and dreams for a healthy life". We invest in differentiated and ground-breaking medical dermatology products to bring our innovative solutions to patients in need.

The company, founded in 1944 and headquartered in Barcelona, is publicly traded on the Spanish Stock Exchange (ticker: ALM). Throughout its 79-year history, Almirall has focused intensely on patients' needs. Almirall has a direct presence in 21 countries and strategic agreements in over 70, with about 1,800 employees. Total revenue in 2022 was €878.5 MM.

For more information, please visit [almirall.com](https://almirall.com)

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### About Barcelona Supercomputing Center-Centro Nacional de Supercomputación (BSC-CNS)

BSC is the leading supercomputing center in Spain. It specializes in high-performance computing with a dual role: providing infrastructure and a supercomputing service for Spanish and European scientists, and generating knowledge and technology to be transferred to society. BSC is a public consortium owned by the Spanish Government Ministry of Science and Innovation (60%), the Catalan Government Department of Research and Universities (30%) and the Polytechnic University of Catalonia (10%). [www.bsc.es](https://www.bsc.es).

### About Nostrum Biodiscovery

Nostrum is a biotech company working together with several major pharmaceutical companies in Europe and the US with a wide knowledge of the requirements of pharmaceutical companies working in computational rational drug design.

Nostrum advantages are its technologies, allowing the saving of costs and the acceleration of the whole process. Secondly, the level of calculation and prediction capacity by computation directly impacts research reliability. Lastly, the team experience and the research excellence have been strongly demonstrated by the internationally recognized institutions that support this project for years now.

We are devoted to the discovery and optimization of new chemical entities for unmet medical needs. The company combines powerful in-house innovative technologies with deep industrial expertise in biomolecular modelling and leads several successful exploratory discovery projects in partnership with academia. It provides tailored, flexible services to help its pharma and biotech clients overcome their early discovery bottlenecks.

## **Almirall's legal warning**

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