The Barcelonaβeta Brain Research Center creates a new research group in AI and Health Data led by Dr. Joaquín Dopazo

- **With this addition, the research center of the Pasqual Maragall Foundation consolidates eight research groups and strengthens its capacity in artificial intelligence and biomedical data analysis applied to neurodegenerative diseases**

- **The new group will develop advanced computational methodologies to integrate multimodal data and improve the prediction, diagnosis, and understanding of diseases such as Alzheimer's**

- **Dr. Joaquín Dopazo, a leading expert in bioinformatics and computational genomics, will head a team focused on integrating artificial intelligence into biomedical research and precision medicine**

Barcelona, May 26, 2026.- The Barcelonaβeta Brain Research Center (BBRC), the research center of the Pasqual Maragall Foundation, is advancing its strategy in data science and artificial intelligence with the new Health AI and Data Research Group, led by Dr. Joaquin Dopazo.

This new team was created with the goal of transforming large volumes of biomedical data into knowledge useful for research and clinical practice. Its work will focus on developing computational models capable of integrating genomic, clinical, cognitive, neuroimaging, and

lifestyle information to improve early detection, patient stratification, and understanding of the mechanisms underlying Alzheimer's disease and other neurodegenerative disorders.

The group will work on identifying biomarkers and predicting disease risk and progression through the use of artificial intelligence, systems biology, and computational genomics. It will also develop new approaches based on synthetic patients and advanced AI systems capable of automatically generating biomedical knowledge, thereby accelerating translational research.

"The integration of complex data using artificial intelligence presents a unique opportunity to better understand neurodegenerative diseases and move toward more precise, preventive, and personalized medicine," **notes Dr. Joaquin Dopazo.**

Methodological Innovation for Precision Medicine

The group's work is organized into several complementary areas. First, the development of **computational tools for data integration and the discovery of biomarkers with diagnostic**, prognostic, and predictive value. Second, **the application of artificial intelligence models for early detection**, prediction of clinical progression, and stratification of patients in early or preclinical stages. And third, **the use of systems biology approaches and mechanistic modeling** to interpret underlying molecular processes and propose new therapeutic strategies.

In addition, the group will pursue emerging research areas such as **computational genomics applied to rare neurodegenerative diseases**, contributing to the functional interpretation of genetic variants, gene prioritization, and the analysis of molecular mechanisms involved in familial and rare forms of these conditions.

Another strategic focus will be the creation of synthetic patients using generative artificial intelligence, an approach that will enable the simulation of virtual cohorts for research and model training while preserving data privacy. At the same time, the group will develop advanced AI systems capable of autonomously exploring biomedical data and scientific literature to generate hypotheses and accelerate the production of knowledge.

Established leadership in bioinformatics and computational genomics

The group is led by **Dr. Joaquin Dopazo** and comprises a multidisciplinary team of specialists in biomedicine, data science, artificial intelligence, and computer science.

Dr. Joaquin Dopazo has extensive experience in bioinformatics, genomics, and systems biology. Throughout his career, he has spearheaded key initiatives in both academia and biomedical research institutions and has held leadership positions at centers such as the National Cancer Research Center, the National Institute of Bioinformatics, the Prince Felipe Research Center, and the Progress and Health Foundation, among others.

His expertise in developing computational methodologies for biomedicine and his leadership in research projects make him a key figure in advancing the application of artificial intelligence to the study of complex diseases.

The addition of this team strengthens the BBRC's roster to eight research groups specializing in key areas such as risk factors, neuroimaging, biomarkers in body fluids, genomics, the biology of aging, and population neuroscience. With the creation of this new line of research, the BBRC

strengthens its position as a leading center for Alzheimer's and brain health research, expanding its capabilities in **data analysis and reinforcing its commitment to technological innovation** as a driver of scientific progress.

Alzheimer's in figures

Currently in Spain, it is estimated that Alzheimer's disease and other dementias affect between 850.000 and 950.000 people, a figure that translates to one in ten people over the age of 65 and one in three of those over 85. These conditions are among the leading causes of mortality, disability, and dependency. If no effective cure is found and, with life expectancy increasing, by 2050 the number of cases could triple worldwide, exceeding one and a half million people in Spain alone, a situation that could overwhelm healthcare and social care systems.

About the BarcelonaBeta Brain Research Center and the Pasqual Maragall Foundation

The BarcelonaBeta Brain Research Center (BBRC) is the research center of the Pasqual Maragall Foundation dedicated to the prevention of Alzheimer's disease and the study of cognitive functions affected in healthy and pathological aging. BBRC's research focuses on the preclinical stage of Alzheimer's, a period prior to the appearance of the first symptoms, when changes in the brain associated with the disease are already occurring. The BBRC, supported by the "la Caixa" Foundation since its creation, has more than 120 professionals dedicated to contributing to the forefront of research on Alzheimer's and other neurodegenerative diseases.

The Pasqual Maragall Foundation is a non-profit organization founded in April 2008 as a response to the commitment made by Pasqual Maragall, former mayor of Barcelona and former president of the Government of Catalonia, when he publicly announced that he had been diagnosed with Alzheimer's disease. The Foundation's mission is to promote research to prevent Alzheimer's and contribute to social transformation by improving the quality of life of affected individuals and their families, as well as raising public awareness about the disease.

The Pasqual Maragall Foundation has the support of more than 115.000 members and:

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