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Supercomputer Creates Alzhimer's Protein Interaction Network

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By Matthew Dublin

A group of researchers from IRB Barcelona and the Joint Programme IRB-BSC have utilized the Barcelona Supercomputing Center's MareNostrum supercomputer to discovered new molecular mechanisms that may be involved in the development of Alzheimer's disease.

Instead of studying individual proteins, the scientists used the power of MareNostrum to analyze the thousands of possible interactions between proteins thought to be involved in the disease and obtained a total of 200 new interactions. These new interactions now brings the total number of known Alzheimer's-related interactions to 6,000, resulting in the largest network of interactions between proteins related to Alzheimer's disease.

The study was led by IRB Barcelona group leader and ICREA researcher Patrick Aloy and was published today as "Interactome mapping suggests new mechanistic details underlying Alzheimer's disease" in *Genome Research*.

The 94 terabyte MareNostrum is housed in the deconsecrated Chapel Torre Girona at the Polytechnic University of Catalonia, Barcelona, Spain:

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