

Launch of E-Biothon, a networked platform for the acceleration and advancement of bioinformatics research

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France has always been at the forefront of medical research, particularly as regards major "epidemics" and pathologies of our time such as AIDS, cancer and diabetes. The genetic and proteomic analysis of viruses or of patients appears to play an increasing role in helping to develop new treatments. Recent technological advances, such as high-throughput sequencers, enable biology researchers to have access to massive amounts of raw data (petabytes of data are generated every year) on the composition of viruses, bacteria and the human species. Analyzing this data to make sense of it is a daunting task that requires huge computer processing capacity.

To speed up processing, CNRS, IBM, Inria, the Institut Français de Bioinformatique and SysFera have joined forces (2) to give researchers access to this Cloud platform, hosted at Idris (3), the CNRS very high performance intensive numerical computing center located in Orsay, near Paris. Combining an application portal with very large computing power, it will make it possible to develop software and applications that will spur on research in biology and health, in particular in genomics and proteomics. The objective is to improve knowledge of [genetic diseases](#) as rapidly as possible, particularly neuromuscular diseases, and to drastically speed up the discovery of new breakthrough treatments. The platform also aims to accelerate research in ecology-biodiversity in order to enhance our understanding of the environment.

The platform comprises high performance IBM Blue Gene/P systems, representing a power of 28 teraflops associated with 200 terabytes of storage, and the SysFera-DS solution, which offers users a web portal for accessing the computational resources. Through this portal, researchers have access to a complete working environment allowing them to easily carry out computerized processing related to analyses in the fields of genomics, proteomics and metabolomics, and then manage the data generated, all through a simple web browser.

Three pilot applications have been rolled out in the first phase, notably in the fields of epidemiology and biodiversity. Following this initial pilot phase, the objective now is to open up this platform, supported by France Grilles and the Institut Français de Bioinformatique, to the scientific community as a whole.

Provided by CNRS

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