DECRYPTHON
Nous sommes tous des chercheurs en puissance

Press release
Évry-Paris, 11 May 2009

Decrypthon calls for 150,000 internet-user volunteers.

Visit www.decrypthon.fr today!

"*Decrypthon is a generous and wonderful human and scientific adventure. Saying 'no' to waste by offering the services of your own computer to help research doesn't cost anybody anything and will be of great benefit to us all. I hope that we'll rally the support of well over 150,000 internet-users for this 2009 project.*"
Thierry Lhermitte, Decrypthon promoter

Launched by the AFM (French Muscular Dystrophy Association) and IBM, with the collaboration of the CNRS (French National Centre for Scientific Research) and French universities, the Decrypthon programme aims to boost research in the field of proteomics and genomics using "grid" technologies, combining the use of supercomputers and/or the computers of individual internet users. Integrated into the World Community Grid (WCG), Decrypthon is now launching phase 2 of the *Help Cure Muscular Dystrophy* (HCMD) project, led by Pierre et Marie Curie University (UPMC). The objective is to determine the interactions between 2,280 proteins involved in neuromuscular diseases or linked to heart or brain diseases. Scientists are seeking the assistance of 150,000 internet users for a one-year period to help perform the billions of calculations required for the project. All web users are invited to **enrol now on www.decrypthon.fr**.

Help Cure Muscular Dystrophy 2: calculating the interactions between 2,280 human proteins

Coordinated by Alessandra Carbone, a professor of Microorganism Genomics at UPMC, the HCMD project aims to model the interactions between proteins in which the 3D structure is known, focusing particularly on the proteins involved in neuromuscular diseases. Following a preparatory phase in 2007 concentrating on 336 proteins, phase 2, now starting, will examine 2,280 human proteins, whose role in muscle diseases is as yet unclear, testing them in pairs, in three dimensions. For each pair, one protein will be fixed and the second will be tested in different spatial configurations thanks to computing power. It would take several dozen centuries to perform these calculations on an individual computer. Sharing the work between 150,000 internet-user volunteers, via the WCG, will scythe this time to around a year!
The results will help scientists gain a clearer understanding of how the target proteins and the associated diseases work and then design compounds that could inhibit or enhance binding between certain proteins. This will enable them to explore new avenues for the treatment of neuromuscular diseases as well as heart and brain diseases in which the same proteins are involved.

Decrypthon programme and World Community Grid: call for 150,000 internet-user volunteers!

First begun in 2001 and relaunched in 2005 by the AFM and IBM, in collaboration with the CNRS, the Decrypthon programme is a technological platform providing the computation power required to process today's complex biological data, the volume of which is doubling every year. As a result, it enables "grid" technologies to pool, in the form of a grid, the available capacities of several supercomputers (500 Gflop) installed by IBM in 6 French universities (Bordeaux 1, Lille 1, Paris 6 Jussieu, ENS Lyon, Crihan in Rouen, Orsay) and/or ordinary personal computers via the World Community Grid (WCG). Around a dozen scientific projects selected following a call for tender have been conducted as part of the Decrypthon programme.
The WCG is a network of internet-user volunteers who make available the unused computing power of their own computers (on average 80%) for the benefit of research, as part of projects of their own choice. They simultaneously process complex calculations that scientists have split down into small parts. This "distributed computation" therefore substantially reduces processing times. The WCG is the biggest non profit-making public computation grid, with more than 441,000 members in 200 different countries and 1.2 million

computers enrolled in this programme. Since it was launched, it has completed the equivalent of 235,000 years of computations and sent back some 266 million results, i.e. 2 results per second.
The Decrypthon "Help Cure Muscular Dystrophy" molecular assembly project is one of eight global humanitarian projects to currently benefit from the World Community Grid.

Enrolments, information and personal accounts on www.decrypthon.fr!

Press contacts
AFM: Delphine Carvalho - +33 (0)1 69 47 28 28 - presse@afm.genethon.fr
IBM: Veronique Barone - +33 (0)1 49 05 73 35 - v_barone@fr.ibm.com
UPMC: Claire de Thoisy-Méchin - +33 (0)1 44 05 23 34 - claire.de_thoisy-mechin@upmc.fr