INRA-MetaGenoPolis furthers metagenomics with ParStream

Worldwide leader of human metagenomics trailblazing with 'big data'

Paris, December 4th 2013 – [ParStream](), publisher of an innovative and award-winning "Big Data Analytics" platform and MetaGenoPolis, INRA's (National Institute for Agricultural Research) industrial demonstrator, world leader in the field of human metagenomics, announced the selection of ParStream to support a new generation of ultra high capacity biotech tools.

INRA coordinates and hosts MetaGenoPolis, a unique facility in Europe at the service of the medical, scientific and industrial communities. Under the direction of Stanislav Dusko Ehrlich, a world expert in microbiology and a pioneer of metagenomics, the team makes major and internationally recognized discoveries. This research paves the way for early diagnosis and new therapies for many diseases such as diabetes, obesity and metabolic diseases generally associated with our digestive system. They study a still little known "organ": the intestinal microbiota, the billions of bacteria that inhabit our digestive tract.

The study of the microbiota requires a massive investigation – billions of bacterial DNA sequences are examined and associated. Analysis of samples can be done from two complementary points of view within MetaGenoPolis: according to an overall exploratory sequencing approach on the MetaQuant analysis platform or according to their biological properties and their interaction with the human cells on the MetaFun analysis platform. Analyses from these platforms results in billions of datapoints on bacteria associated with humans as well as other environments.

This "big data" approach of the bacterial universe requires a well-suited tool supported by commodity hardware – standard and in large series – due to the huge volumes of data to be processed. Essentially, ParStream – a European product – is the only software based product that can leverage highly parallelized hardware architecture such as GPUs while processing information in compressed mode. This provides operations with a low resource footprint and a high energy efficiency.

"We need a tool that can technically handle these volumes while leaving us free for our hardware choices and their evolution" explains Jean-Michel Batto, technical leader for MetaGenoPolis, adding, "Our applications are calculation intensive, so the fact that ParStream can exploit dense hardware architectures such as GPUs is critical. Furthermore, it is imperative that the tool meets standards, it is resource efficient and that it allows us to stay focused on our research ".

"We are very pleased to be associated with this very high level team" said Mike Hummel, ParStream's CEO, continuing, "The capabilities of our platform will allow an application simplification while improving performance." Peter Livaudais, Sr. Director Solutions, adds, "This application shows a noticeable trend towards establishing industrial approaches regarding 'big data' innovation".

About ParStream

ParStream is a breakthrough, award winning, big data analytics platform. ParStream's unique patented technology enables ultra-fast, flexible analytics of stored and streaming data while operating under the best cost and energy efficiency ratios. ParStream is used worldwide in digital marketing, ecommerce, retail, telecommunications and research applications. Based in Cologne, ParStream has been ranked "#1 Big Data Startup" by CIO.com and "Cool Vendor" by Gartner.

For more information, visit www.parstream.com

About INRA, MetaGenoPolis (MGP)

MetaGenoPolis is a pre-industrial demonstrator project, financed by the national "Investments for the Future" program and conducted by INRA (National Institute of Agronomic Research) in association with ICAN (Paris, Institute of Cardiometabolism an Nutrition) and the UCLy (Catholic University of Lyon). Within INRA, MGP is driven by a Jouy en Josas laboratory in collaboration with the Micalis research unit.

For more information, visit www.mgps.eu