

Roche et IBM s'associent afin de développer les technologies liées au séquençage de l'ADN

Cette collaboration a pour but d'accélérer l'analyse du génome humain et d'engendrer des avancées conséquentes dans le domaine de la santé

YORKTOWN HEIGHTS, N.Y. & BRANFORD, Conn. - 01 juil. 2010: Roche (SIX: RO, ROG; OTCQX: RHHBY) and IBM (NYSE: IBM) announced today a partnership to develop a nanopore-based sequencer that will directly read and decode human DNA quickly and efficiently. Focused on advancing IBM's recently published "DNA Transistor" technology, the collaboration will take advantage of IBM's leadership in microelectronics, information technology and computational biology and Roche's expertise in medical diagnostics and genome sequencing.

The novel technology, developed by IBM Research, offers true single molecule sequencing by decoding molecules of DNA as they are threaded through a nanometer-sized pore in a silicon chip. The approach holds the promise of significant advantages in cost, throughput, scalability, and speed compared to sequencing technologies currently available or in development.

*"By merging computational biology, biotechnology, and nanotechnology skills, we are moving closer to producing a system that can quickly and accurately translate DNA into medically-relevant genetic information," said **Ajay Royyuru, Senior Manager of the Computational Biology Department at IBM Research**. "The challenge of all nanopore-based sequencing technologies is to slow and control the motion of the DNA through the nanopore. We are developing the technology to achieve this so that the reader can accurately decode the DNA sequence."*

Ultimately, the technology has the potential improve throughput and reduce costs to achieve the vision of whole human genome sequencing at a cost of \$100 to \$1,000. Having access to an individual's personal genetic code could advance the quality of medical care by identifying persons who will gain the greatest benefit from a particular medicine and those who are at most risk of adverse reaction.

*"Sequencing is an increasingly critical tool for personalized healthcare. It can provide the individual genetic information necessary for the effective diagnosis and targeted treatment of diseases," explained **Manfred Baier, Head of Roche Applied Science**. "We are confident that this powerful technology - plus the combined strengths of IBM and Roche - will make low-cost whole genome sequencing and its benefits available to the marketplace faster than previously thought possible."*

As part of the agreement, Roche will fund continued development of the technology at IBM and provide additional resources and expertise through collaboration with Roche's sequencing subsidiary, 454 Life Sciences. Roche will develop and market all products based on the technology.

Roche's investment in future genomic technologies builds upon the strength of its currently available 454 Sequencing Systems, which generate hundreds of thousands of long, high quality sequencing reads in hours. The technology is available for large-scale genomic analysis with the GS FLX System and for benchtop sequencing with the GS Junior System. Shown to provide significant medical value in targeted resequencing applications for virology and oncology research, 454 Sequencing Systems are poised to be first next-generation sequencing technology to move from the laboratory to the clinic.

For more information on 454 Sequencing Systems, visit www.454.com

and see this videos : <http://www.youtube.com/watch?v=pKi30ai35mU> and <http://www.youtube.com/watch?v=wwcIP3GySUY>

About Roche

Headquartered in Basel, Switzerland, Roche is one of the world's leading research-focused healthcare groups in the fields of pharmaceuticals and diagnostics. As the world's biggest biotech company and an innovator of products and services for the early detection, prevention, diagnosis and treatment of diseases, the Group contributes on a broad range of fronts to improving people's health and quality of life. Roche is the world leader in in-vitro diagnostics and drugs for cancer and transplantation, and is a market leader in virology. It is also active in other major therapeutic areas such as autoimmune diseases, inflammatory and metabolic disorders and diseases of the central nervous system. In 2008 sales by the Pharmaceuticals Division totaled 36.0 billion Swiss francs, and the Diagnostics Division posted sales of 9.7 billion francs. Roche has R&D agreements and strategic alliances with numerous partners, including majority ownership interests in Genentech and Chugai, and invested nearly 9 billion Swiss francs in R&D in 2008. Worldwide, the Group employs about 80,000 people. Additional information is available on the Internet at www.roche.com.

About IBM

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