



Branford, June 11, 2008

454 Sequencing Joins the International 1000 Genomes Project

Continuing Roche's commitment to support human genomic research, 454 Sequencing will deliver results of the highest quality and completeness to international research effort.

Leaders of the 1000 Genomes Project announced today that three firms that have pioneered development of new sequencing technologies have joined the international effort to build the most detailed map to date of human genetic variation as a tool for medical research. The new participants are: 454 Life Sciences, a company of Roche, Branford, USA.; Applied Biosystems, an Applied Biosystems Corp. business, Foster City, USA.; and Illumina Inc., San Diego, USA.

The 1000 Genomes Project, which was announced in January, is an international research consortium that is creating a new map of the human genome that will provide a view of biomedically relevant DNA variations at a resolution unmatched by current resources. Organizations that have already committed major support to the project are: the Beijing Genomics Institute, Shenzhen, China; the Wellcome Trust Sanger Institute, Hinxton, Cambridge, U.K.; and the National Human Genome Research Institute (NHGRI), part of the National Institutes of Health. The NHGRI-supported work is being done by the institute's Large-Scale Sequencing Network, which includes the Human Genome Sequencing Center at Baylor College of Medicine, Houston; the Broad Institute of MIT and Harvard, Cambridge, Mass.; and the Washington University Genome Sequencing Center at Washington University School of Medicine, St. Louis.

Previous studies, such as the International HapMap project, have identified genetic variants that are present at a frequency of 5 percent or greater. The catalog produced by the 1000 Genomes Project will map many more details of the human genome and how it varies between individuals, identifying genetic variants that are present at a frequency of 1 percent across most of the genome and down to 0.5 percent or lower within genes. The 1000 Genomes Project's high-resolution catalog will serve to accelerate many future research studies of people with specific illnesses.

"In some ways, this application of the new sequencing technologies is like building bigger telescopes," said NHGRI Director Francis S. Collins, M.D., Ph.D. "Just as astronomers see farther and more clearly into the universe with bigger telescopes, the results of the 1000 Genomes Project will give us greater resolution as we view our own genetic blueprint. We'll be able to see more things more clearly than ever before and that will be important for understanding the genetic contributions to health and illness."

The full-scale project will involve sequencing the genomes of at least 1,000 people, drawn from several populations around the world, though that number will likely grow to 1,500 or more. The project will use samples from donors who have given informed consent for their DNA to be analyzed and placed in public databases. Most of these samples have already been collected, and any additional samples will come from specific populations. The data will contain no medical or personal identifying information about the donors.



"454 Life Sciences is proud to become contributor to the 1000 genomes project as we continue to contribute to the community's understanding of the complexity of the human genome. As a natural follow up to the human genome project and the HAP MAP project, this new endeavor will significantly expand our knowledge of genetic variation and accelerate the realization of personalized medicine," said Michael Egholm, Ph.D, Vice President of R&D at 454 Life Sciences. "We believe that the 454 Sequencing System will make a significant impact on the project as the technology's high accuracy and long read lengths, in excess of 400 bases, generate the high quality results needed to comprehensively identify variations between individual human genomes."

454 Life Sciences, a part of Roche Applied Science, the life science unit of Roche, develops and commercializes the innovative Genome Sequence System for ultra-high-throughput DNA sequencing. Specific applications include de novo sequencing and re-sequencing of genomes, metagenomics, RNA analysis, and targeted sequencing of DNA regions of interest. The hallmarks of 454 Sequencing are its simple, unbiased sample preparation and long, highly accurate sequence reads, including paired reads. Sequencing technology of 454 has enabled many peer-reviewed studies in diverse research fields such as cancer and infectious disease research, drug discovery, marine biology, anthropology, paleontology, and many more.

For additional information, please visit <http://www.454.com>. For more information on the technology, visit www.roche-applied-science.com/sis/sequencing.

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 2007 sales by the Pharmaceuticals Division totalled 36.8 billion Swiss francs, and the Diagnostics Division posted sales of 9.3 billion francs. Roche has R&D agreements and strategic alliances with numerous partners, including majority ownership interests in Genentech and Chugai, and invested over 8 billion Swiss francs in R&D in 2007. Worldwide, the Group employs about 79,000 people. Additional information is available on the Internet at www.roche.com.

All trademarks used or mentioned in this release are legally protected by law.

454 and 454 Sequencing are trademarks of 454 Life Science Corporation, Branford, CT, USA, a Roche company.

All brands or product names are trademarks of their respective holders