

Branford, USA, November 19, 2009

454 Life Sciences Unveils New Bench Top Sequencer, Significant Improvements to the Genome Sequencer FLX System Including 1,000 bp Reads for 2010

454 Life Sciences, a Roche Company (SIX: RO, ROG; OTCQX: RHHBY), announced today at the Association of Molecular Pathology Annual Meeting in Kissimmee, Florida a series of revolutionary developments which significantly expand the company's high-throughput sequencing portfolio. Addressing the growing demand for next-generation sequencing data in everyday biological and clinical research, the company revealed the new GS Junior System, an affordable bench top sequencing platform slated for release in 2010.

The GS Junior System, which is no bigger than a typical laser printer, has performance and features tuned to fit the needs of small to medium sized laboratories. The platform will launch with long-read GS Junior Titanium chemistry, offering 400 – 500 bp read lengths, and will be shipped with a desktop computer that is optimized for GS Junior Run processing and downstream data analysis. "With the GS Junior System, we are extremely excited to make next-generation sequencing readily available to the individual researcher, just as the PC brought computing to the masses," said Christopher McLeod, President and CEO of 454 Life Sciences. "This truly enabling technology is now affordable for nearly every research lab. At the same time, we continue to extend the performance of our flagship Genome Sequencer FLX System."

The company announced plans to initiate an early access program for development of the next set of performance improvements to the Genome Sequencer FLX System, which will double the read length of the current GS FLX Titanium Kits expect to contain reads up to 1,000 bp. The DOE Joint Genome Institute will be the first site to begin early access later this month and will use the long-read chemistries to sequence a variety of large, complex genomes. Additional early access partners are expected to be announced in the near future.

"The value of our longer read lengths, coupled with the latest advances in our assembler software, have been demonstrated by the successful conclusion of a number of recent *de novo* sequencing projects, such as the cod fish genome," explained Michael Egholm, CTO and Vice President of R&D

Burkhard Ziebolz
Roche Diagnostics GmbH

Nonnenwald 2
D-82377 Penzberg

RAS Global Communication

Tel. +49-8856-60-4830
Email: burkhard.ziebolz@roche.com

of 454 Life Sciences. “The Genome Sequencer FLX System provides a robust platform to sequence and assemble nearly any size genome quickly, without the need for supplementary Sanger data.”

The company’s final announcement at the event was the launch and immediate availability of several new kits, protocols and software updates for the Genome Sequencer FLX System. The new products enable two new major application areas to take advantage of the long 400-500 bp reads and increased density of the GS FLX Titanium series chemistry - transcriptome sequencing and amplicon (PCR product) sequencing. Additional product updates highlight the company’s continued efforts to ease workflow, including a new Rapid Library Preparation Kit which takes around half of the time and requires significantly less input DNA, and a set of 12 Rapid Library Multiplex Identifier (MID) Adaptors for sample pooling.

Significant improvements to the complete suite of GS Data Analysis Software are evident in the new GS *De Novo* Assembler software, now capable of processing data sets from human-sized genomes (3Gb) and transcriptomes. Together the new cDNA sequencing protocol and assembler software offer a complete solution for *de novo* transcriptome sequencing and analysis, enabling a comprehensive picture of the gene space of nearly any organism, even previously uncharacterized species.

“We are finding that the long EST reads generated by the Genome Sequencer FLX System often readily span multiple exons and are aligned with a high degree of uniqueness when analyzed with our new transcriptome assembler software,” said Egholm. “We believe this solution will yield significant advantages over existing approaches due to the ease of assembly and the ability to characterize alternatively spliced transcripts for a wide range of organisms, without the need for a reference.”

Finally, the latest set of GS FLX Titanium Kits include a new solution for targeted amplicon sequencing applications, now supporting ultra-deep sequencing of long 400 bp amplicons. “Amplicon sequencing with the Genome Sequencer FLX System has paved the way for important medical research over the past few years, including detection of low-frequency drug-resistance variants in HIV-infected samples, and high-resolution HLA sequencing and typing,” explained McLeod. “GS FLX Titanium Amplicon sequencing will push these studies to the next level by allowing amplicon designs similar to those currently used in Sanger amplicon sequencing, with the additional benefit of up to 1 million clonal reads per run.”

For more information on 454 Sequencing Systems, visit www.454.com. To visit the GS Junior micro-site, visit www.gsjunior.com.

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 totalled 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.

FOR LIFE SCIENCE RESEARCH ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

454, 454 SEQUENCING, 454 LIFE SCIENCES, GS FLX, GS FLX TITANIUM, and GS JUNIOR are trademarks of Roche.

For further information please contact:

Roche Diagnostics
Dr. Burkhard Ziebolz
Phone: +49 8856 604830
Email: burkhard.ziebolz@roche.com

454 Life Sciences Corporation, a Roche company
Dr. Ulrich Schwoerer
Phone: 203-871-2300
Email: ulrich.schwoerer@roche.com

Burkhard Ziebolz
Roche Diagnostics GmbH

Nonnenwald 2
D-82377 Penzberg

RAS Global Communication

Tel. +49-8856-60-4830
Email: burkhard.ziebolz@roche.com