News Release



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FOR IMMEDIATE RELEASE

Applied Biosystems Provides New Analytical Tools for Short Read De Novo Assembly on SOLiDTM 3 System

Tools from SoftGenetics and European Bioinformatics Institute to help researchers reconstruct, assemble, and visualize short read sequencing data

PHILADELPHIA – November 12, 2008 – Applied Biosystems Inc. (NYSE:ABI) today announced during the 58th Annual American Society of Human Genetics (ASHG) Meeting that it has expanded its suite of applicationspecific bioinformatics solutions to include de novo assembly of small organisms on the SOLiD 3 System, the company's high-performance next-generation sequencing platform that enables the comprehensive analysis of genomes, transcriptomes and epigenomes. Two analysis tools from SoftGenetics and the European Bioinformatics Institute (EBI) were developed to help researchers reconstruct, assemble, and visualize short read sequencing data generated by Applied Biosystems' SOLiDTM technology. These tools are currently available through the company's SOLiD Software Development Community.

The research community is utilizing de novo assembly of microbial genomes to expand the database of model organisms for basic research and enhance knowledge of health and disease. The availability of de novo sequencing analytical tools on the SOLiD 3 System, combined with the accuracy and longer read length of the technology, may help to accelerate the development of microbial reference sequence in both large-scale microbial initiatives, such as the Human Microbiome Project, as well other focused research programs.

Enhancements to the SOLiD 3 System, including faster run times, longer read lengths and the incorporation of an imaging buffer that improves signal-to-noise ratio, will enable researchers to utilize the platform for de novo sequencing of microbial genomes. The SOLiD 3 System is the only commercially available platform in the life science industry to provide a path to a \$10,000 genome, which has the potential to dramatically accelerate biomedical research, and personalize medicine.

SoftGenetics, a new member of the SOLiD Software Development Community, is a bioinformatics company that specializes in the development of genetic analysis tools for both research and diagnostic applications. The company's NextGENe[™] sequencing software analyzes data from multiple applications generated on nextgeneration sequencing platforms and enables the assembly, alignment, quality control and annotation of de novo sequencing. In addition to de novo assembly, the NextGENe's applications include targeted resequencing for single nucleotide polymorphism (SNP) and insertion/deletion (INDEL) discovery, mate pair analysis, gene expression analysis, chromatin immunoprecipitation (ChIP) sequencing, transcriptome with cDNA analysis and miRNA discovery and quantification.

"NextGENe is a powerful desktop solution for the assembly of SOLiD's color space reads for de novo assembly," said Kevin LeVan, NextGENe product manager for SoftGenetics. "The longer read lengths enabled by the new SOLiD 3 System allow researchers to successfully conduct de novo sequence assembly for smaller organisms. The NextGENe software, with our proprietary assembly methodology, complements the SOLiD 3 System by

providing biologists and clinical researchers with a streamlined analysis pipeline without major investment in computer hardware and bioinformatics staff."

Velvet, a short read de novo assembly tool developed by the EBI, is an open-source algorithmic package for assembling short reads into contigs, a continuous sequence of DNA that has been assembled from overlapping cloned DNA fragments. In collaboration with EBI, Applied Biosystems developed a de novo assembly bioinformatics pipeline which can produce high-quality scaffolds up to 50 kilo bases (kb) and convert color-space contigs into base space contigs for easier viewing and analysis. This pipeline provides read quality filters on color-space data, conversion into color-space contigs, and final conversion to nucleotide sequences for consensus calling and error correction. The pipeline has been extensively tested against Escherichia coli (E. coli), a commonly used model organism in biological studies. Applied Biosystems' and EBI's complementary analysis tools will enable researchers to directly take data from the SOLiD System and produce high-quality, base-space assemblies. These tools are freely downloadable from the SOLiD Software Development Community web site.

"We believe the research community as a whole benefits from the broad availability of open-source tools such as Velvet," said Daniel Zerbino, Ph.D. and developer of the Velvet assembly tool at the EBI. "It is our hope that academic researchers will be able to use this tool to increase the amount of information extracted from the data generated by next-generation sequencing platforms."

The Applied Biosystems Software Development Community supports bioinformaticians and life scientists in the development and potential commercialization of informatics applications for next-generation genomic analysis platforms. The community has noted more than 25,000 downloads of sample data sets and data analysis tools and other site content by the hundreds of researchers, independent software vendors, bioinformatics service providers, and SOLiD System users who have visited the site.

"Enabling NextGENe and Velvet on the SOLiD platform for de novo assembly demonstrates Applied Biosystems' dedication to expanding the portfolio of addressable applications on the technology. By making these analytical tools broadly available to the next-generation sequencing bioinformatics community, researchers will be able to better analyze and manage the volume of data generated on the SOLiD platforms," said Roger Canales, senior manager of Applied Biosystems' SOLiD Software Development Community. "The bioinformatics tools, software and commercial partners we have established and sustained through our SOLiD Software Development Community will help our customers establish new standards for genomic analysis research."

About the SOLiD 3 System

The SOLiD 3 System is the life science industry's most comprehensive solution from sample to results. The platform is based on sequencing by oligonucleotide ligation and detection. Unlike polymerase sequencing approaches, the platform utilizes a proprietary technology called stepwise ligation, which generates the industry's most cost-effective and accurate mappable sequence data for a variety of applications. The SOLiD 3 System is capable of generating 20 billion bases of mappable sequence data per run in customer laboratories, and has demonstrated runs of greater than 25 billion bases of mappable sequence data at Applied Biosystems' research and development facilities. The SOLiD 3 System is supported by one of the life-science industry's most comprehensive service and support organization of more than 2,000 dedicated field personnel worldwide, specializing in business consulting and protocol development, instrument optimization, and data and application integration. Further information about the SOLiD 3 System is available at http://solid.appliedbiosystems.com.

The SOLiD 3 System is available as an upgrade to an existing platform, or as a stand-alone instrument. To receive the SOLiD 3 upgrade, contact a regional service representative, who can install components that include a new compute cluster, automation components and reagent cooling hardware, and software. The SOLiD 3 System is expected to be globally available in early 2009.

For more information about the SOLiD 3 System or the Software Development Community please visit: <u>http://info.appliedbiosystems.com/solidsoftwarecommunity</u> or <u>http://www3.appliedbiosystems.com/AB_Home/applicationstechnologies/SOLiDSystemSequencing/DeNovoSeq_uencing/index.htm</u>

For those interested in receiving more information about an Applied Biosystems de novo-focused webinar, please visit <u>http://info.appliedbiosystems.com/SOLIDwebinars</u>

About Applied Biosystems Inc.

Applied Biosystems Inc. (formerly known as Applera Corporation) is a global leader in the development and marketing of instrument-based systems, consumables, software, and services for academic research, the life science industry and commercial markets. Driven by its employees' belief in the power of science to improve the human condition, the company commercializes innovative technology solutions for DNA, RNA, protein and small molecule analysis. Customers across the disciplines of academic and clinical research, pharmaceutical research and manufacturing, forensic DNA analysis, and agricultural biotechnology use the company's tools and services to accelerate scientific discovery, improve processes related to drug discovery and development, detect potentially pathogenic microorganisms, and identify individuals based on DNA sources. Applied Biosystems has a comprehensive service and field applications support team for a global installed base of high-performance genetic and protein analysis solutions. Applied Biosystems Inc. is headquartered in Norwalk, CT. On June 12, 2008, Applera Corporation and Invitrogen Corporation (NASDAQ: IVGN) announced that their Boards of Directors had approved a definitive merger agreement under which Invitrogen will acquire all of the outstanding shares of Applied Biosystems stock. The merger is subject to customary closing conditions and is targeted to close November 21, 2008. Information about Applied Biosystems, including reports and other information filed by the company with the Securities and Exchange Commission, is available at http://www.appliedbiosystems.com. All information in this news release is as of the date of the release, and Applied Biosystems does not undertake any duty to update this information unless required by law.

Applied Biosystems Forward Looking Statements

Certain statements in this press release are forward-looking. These may be identified by the use of forward-looking words or phrases such as "should, "planned," and "expect," among others. These forward-looking statements are based on our current expectations. The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for such forward-looking statements. In order to comply with the terms of the safe harbor, we note that a variety of factors could cause actual results and experience to differ materially from the anticipated results or other expectations expressed in such forward-looking statements. These factors include but are not limited to: (1) rapidly changing technology and dependence on customer acceptance of the SOLiD System; (2) the risk of unanticipated difficulties associated with the further development of the SOLiD[™] System; and (3) other factors that might be described from time to to time in our filings with the Securities and Exchange Commission. All information in this press release is as of the date of the release, and we do not undertake any duty to update this information, including any forward-looking statements, unless required by law.

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