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## **New Torrent Suite Software Provides Highest Accuracy and 400 Base Pair Kits Deliver Broader Applications for Ion Semiconductor Sequencing**

### **99.99+% consensus accuracy achieved across entire AmpliSeq™ portfolio**

CARLSBAD, Calif., Sept. 6, 2012 /PRNewswire/ -- [Life Technologies Corporation](#) (NASDAQ: LIFE) today announced another major advancement in the performance trajectory of its Ion AmpliSeq Technology. The new Torrent Suite Software v3.0 now consistently delivers 99.99+% consensus accuracy for both short and long homopolymer regions, and increases the frequency of correctly called insertions, deletions and homopolymer sequences by two-fold.

Read length on the Ion PGM™ also continues its unprecedented scalability with today's launch of the 400 base sequencing kits, which will provide a broader range of applications, such as bacterial identification, metagenomic analysis, Human Leukocyte Antigen sequencing, and better *de novo* assemblies.

"Ion's new long read kits combined with accuracy increases from Torrent Suite v3.0 have enabled us to significantly improve the performance of our bacterial and metagenomic sequencing as well as microbial genome assemblies," said Professor Dag Harmsen of the University of Muenster, Germany — a researcher at the epicenter of last year's pathogenic *E coli* outbreak. "The rapid generation of long accurate reads by the Ion PGM Sequencer will truly enable the new science of prospective genomic epidemiology."

### **AmpliSeq™ Technology Transforms Research**

Six months after its introduction to the market, Ion AmpliSeq Technology has significantly [transformed the way hypothesis-driven research is conducted](#). More than 700 customers have completed over 2,500 gene panel designs and high throughput laboratories have achieved annual run rates of over 1,000 runs per Ion PGM System.

A new Ion AmpliSeq Sample ID Panel reveals sample misidentification to increase confidence during data analysis and reporting. Ion Reporter Software now incorporates oncology and inherited disease trio research workflows. These advances improve the sensitivity and utility of all existing Ion AmpliSeq Panels, as well the soon to be launched Ion AmpliSeq Cancer Panel v2. This new, ready-to-use panel offers additional oncogene content and approaches 100% coverage uniformity, further widening the performance gap relative to competing target enrichment products.

"The Ion AmpliSeq Technology has demonstrated a remarkable improvement in performance, specifically in exceptional coverage uniformity and additional mutational coverage, allowing for better overall economics and making causative variant identification much simpler," said William Strauss, Principal Research Scientist at Cynvenio Biosystems.

Ion semiconductor sequencing delivers both long reads and high throughput. In contrast, light-based sequencing technologies typically provide either short reads with high throughput, or longer reads with moderate throughput. The new [Ion PGM Sequencing Kits](#) include a long-read sequencing enzyme supporting two long read runs per day - versus days or weeks for light based sequencing systems. A 300-base template preparation kit is shipping, with a 400-base template preparation kit available in the fourth quarter of 2012. Long read datasets [including a 2 Gb run with 400 base](#) reads are posted on the Ion Community.

"We believe semiconductor sequencing is replacing light-based sequencing applications in the same way as digital photography put film out of business," said Dr. Jonathan Rothberg, CEO and founder of Ion Torrent. "Ion AmpliSeq Technology is a perfect example of a tool that can help transform the way research is performed."

### **Diagnostic Road-Map**

The rapid performance advancement of the Ion PGM™ Sequencer, including read length, accuracy and throughput, position Life Technologies to "lock down" robust kits and protocols to prepare for 510(k) clearance with the U.S. Food and Drug Administration. The upgraded Ion AmpliSeq and Ion Reporter whole product solution also allows accurate and easy probing of disease-relevant genes, enabling useful advancements in research.

All above mentioned products are For Research Use Only. Not for use in diagnostic procedures.

## **About Life Technologies**

Life Technologies Corporation (NASDAQ: LIFE) is a global biotechnology company with customers in more than 160 countries using its innovative solutions to solve some of today's most difficult scientific challenges. Quality and innovation are accessible to every lab with its reliable and easy-to-use solutions spanning the biological spectrum with more than 50,000 products for translational research, molecular medicine and diagnostics, stem cell-based therapies, forensics, food safety and animal health. Its systems, reagents and consumables represent some of the most cited brands in scientific research including: Ion Torrent™, Applied Biosystems®, Invitrogen™, GIBCO®, Ambion®, Molecular Probes®, Novex®, and TaqMan®. Life Technologies employs approximately 10,400 people and upholds its ongoing commitment to innovation with more than 4,000 patents and exclusive licenses. LIFE had sales of \$3.7 billion in 2011. Visit us at our website: <http://www.lifetechnologies.com>.

## **Life Technologies' Safe Harbor Statement**

This press release includes forward-looking statements about our anticipated results that involve risks and uncertainties. Some of the information contained in this press release, including, but not limited to, statements as to industry trends and Life Technologies' plans, objectives, expectations and strategy for its business, contains forward-looking statements that are subject to risks and uncertainties that could cause actual results or events to differ materially from those expressed or implied by such forward-looking statements. Any statements that are not statements of historical fact are forward-looking statements. When used, the words "believe," "plan," "intend," "anticipate," "target," "estimate," "expect" and the like, and/or future tense or conditional constructions ("will," "may," "could," "should," etc.), or similar expressions, identify certain of these forward-looking statements. Important factors which could cause actual results to differ materially from those in the forward-looking statements are detailed in filings made by Life Technologies with the Securities and Exchange Commission. Life Technologies undertakes no obligation to update or revise any such forward-looking statements to reflect subsequent events or circumstances.

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## **Life Technologies Contact**

Wes Conard

650-243-6019

[wes.conard@lifetech.com](mailto:wes.conard@lifetech.com)

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