Fluidigm introduces the C1 single-cell autoPrep system to researchers at ISSCR

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Fluidigm (NASDAQ:FLDM) today unveiled the details of its new C1™ Single-Cell AutoPrep System to attendees at the International Society for Stem Cell Research (ISSCR) meeting in Yokohama, Japan. The C1 System, based on Fluidigm's innovative microfluidic technology, enables a researcher to isolate and process individual cells rapidly and reliably for genomic analysis. For the first time, a researcher can isolate cells, extract RNA, and then reverse transcribe and preamplify mRNA transcripts automatically to enable detection and analysis of cell activity.

Fluidigm has become a leader in the emerging field of single-cell genomics with its widely adopted BioMark™ and BioMark HD Systems, enabling scientists to routinely examine previously unavailable genomic signatures generated from a single cell. The stem cell research community in Japan, and indeed around the world, has been an important early customer group exploring single cells. Stem cell, cancer and immunology research are expected to be the initial focus applications for the C1 System.

As part of its activities at ISSCR, Fluidigm also announced the start of its Early Access Program for the C1 System. The C1 System has been specifically designed to work seamlessly with the BioMark HD System to enhance the workflow and reliability of data for scientists studying single-cell genomics. The Early Access Program allows select customers the opportunity to receive the first commercial shipments during the second half of 2012 before shipment to the broader group of customers. In addition to being the first to utilize the new technology, Early Access Program partners will be provided with no-cost startup consumables, participate in the development of new platform capabilities, and receive pre-market access to future platform expansions. Researchers interested in the Early Access Program can register at www.fluidigm.com/c1system [1].

"The new C1 Single-Cell AutoPrep System is the first of its kind. The C1 System handles, separates and prepares individual single cells for genetic analysis. We are very excited about the commercial release of the C1, for we believe it will enable single-cell research on a broad scale that will in turn make profound contributions to numerous fields in biology," said **Gajus Worthington**, President and Chief Executive Officer, Fluidigm. *"Though the C1 represents a major advance in single-cell genomics, we are at the beginning of what we can do together with the scientific community. Ultimately, the C1 System will allow researchers to study cell differentiation, measure individual cell responses to specific stimuli, verify critical disease biomarkers, validate RNAi knockdown, and sequence individual cells,"* **Worthington** concluded.

The C1 System workflow is initiated by loading a sample of cells in solution into the C1 microfluidic chip in a single pipetting step, then directing the C1 System to rapidly and automatically isolate up to 96 individual cells into individual chambers for preparation. After loading, researchers can choose an “in-process” quality control checkpoint to verify the number of captured cells and distinguish live from dead cells to preserve data integrity. The workflow then proceeds with a rapid “on-chip” cell lysis without RNA purification, reverse transcription, and preamplification without hands-on reagent mixing and sample transfer. The final preamplified cDNA product is thereafter harvested to collection wells for transfer to the BioMark HD System for quantitative PCR analysis.

The C1 Single Cell AutoPrep System consists of:

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Links:
[1] http://www.fluidigm.com/c1system