

PRESS RELEASE

Cellular Research Unveils Massively Parallel Single-Cell Sequencing Technology; Announces Partnership Program for Drug Discovery and Diagnostics

Next-Generation Single-Cell Technology Published in Science

Palo Alto, Calif., USA – February 5, 2015 – Cellular Research, Inc., today unveiled a new, massively parallel single-cell sequencing technology platform that enables higher-resolution digital biology. Demonstrated in a manuscript published today in *Science* by company scientists Christina Fan, Ph.D., Glenn Fu, Ph.D., and Stephen Fodor, Ph.D., this next-generation single-cell technology, which Cellular Research calls Resolve™ genetic cytometry, simultaneously measures the expression profile of large numbers of genes in thousands of single cells with high sensitivity and digital precision.

Single-cell analysis is widely acknowledged by leading academic and industry researchers as the next frontier of biological discovery and clinical advancement. Traditionally, scientists have relied on next-generation sequencing (NGS), microarrays, or quantitative PCR (qPCR) to measure tens to thousands of genes expressed from a sample — but these technologies are not designed to examine individual cells. As a result, scientists lose highly valuable information and the ability to assign important molecular differences among discreet cell types. The current format of the Resolve technology can examine any number of genes across thousands of single cells per sample, and is designed to scale to tens of thousands or hundreds of thousands of cells, for pennies per cell.

“Although sequencing has become less expensive in recent years, the ability to measure genetic profiles at the individual cell level has been extremely constrained by the limitation of technologies to prepare sequencing libraries from single cells,” said Christina Fan, Ph.D., paper lead author and Staff Scientist at Cellular Research. “This elegantly simple approach based on molecular indexing provides orders of magnitude improvements in throughput and cost compared to existing single-cell analysis technologies.”

Stephen Fodor, Ph.D., Chief Executive Officer of Cellular Research, commented: “The Resolve technology has tremendous capability to impact fields extending from basic research to therapeutic discovery by enabling massively parallel, single-cell genomic profiling. We now have a practical and scalable technology to examine the genetic heterogeneity in tumors, follow the orchestra of players in an immune response, and more generally help to unravel the role of cellular diversity in health and disease.”

The *Science* manuscript describes a technically simple approach for genetic cytometry that pairs a unique molecular barcoding strategy with NGS. The results reported in this paper are supported by a number of validation studies in hematopoietic cells and demonstrate the ability to resolve the digital gene expression profile of each cell without ambiguity.

“We expect the Resolve platform to offer powerful insights for basic research projects and for a number of important medical conditions in fields such as oncology, immunology, neuroscience, and immunotherapy,” Fodor added. “We have already engaged in partnerships for several of

these high-value application areas, and are looking forward to evaluating additional opportunities now that the technology has been introduced and we have formally launched our partner program.”

The company plans to have prototype systems based on the Resolve technology available in late 2015, with commercial units shipping in 2016. For more information, please visit www.cellular-research.com/resolve/.

About Cellular Research

Cellular Research, Inc. is a biotechnology research and development company founded by innovators from Silicon Valley and Stanford University whose mission is to develop revolutionary quantitative biology products. Cellular Research is commercializing research products (including Pixel™, a standalone direct mRNA quantitation platform, and Precise™, ultra-sensitive, high-throughput molecular assays to examine standard or low-input mRNA samples) and partnering with pharmaceutical and diagnostics companies for clinical applications. For more information, please visit <http://www.cellular-research.com/>.

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