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Thermo Fisher Scientific and pharmaceutical companies, GlaxoSmithKline (GSK) and Pfizer have entered into an agreement to develop a universal next-generation sequencing (NGS) oncology test for solid tumors that will serve as a companion diagnostic for multiple drug programs.

The test will be developed using Thermo Fisher Scientific's Ion Personal Genome Machine (PGM) Dx Platform, Ion AmpliSeq technology, and content from the Oncomine Cancer Research Panel.

Companion diagnostics refer to tests that help identify those patients who are most suitable for treatment with targeted therapies.

Using the Ion PGM Sequencing Platform combined with Ion AmpliSeq technology, hundreds of genes can be simultaneously analyzed from tumor samples via next-generation sequencing, with high reproducibility and rapid turnaround time.

"To realize the promise of personalized medicine in oncology, cancer patients increasingly require multiple, complex genetic tests. Together with Pfizer, GSK, and potentially other pharmaceutical companies, we seek to change the paradigm and develop a single next-generation sequencing test that can provide a comprehensive analysis of multiple, relevant genetic markers," said Mr Dan Rhodes, head of Oncology for lifescience solutions at Thermo Fisher Scientific. He added, "This approach will help ensure that cancer patients have an opportunity to potentially benefit from a targeted therapy associated with their tumor's genetic profile."

The development of this new universal companion diagnostic test will include markers from the Oncomine Cancer Research panel, which enables simultaneous testing of single nucleotide variants (SNVs), copy number variants (CNVs), gene fusions,

and indels across 143 unique cancer genes.

"The NGS-based approach will help accelerate the development of these promising new therapies and will ultimately help physicians identify clinical trials that help provide their patients with the best possibility of a successful outcome. An important additional benefit of using a multi-marker approach that interrogates many genetic markers simultaneously is that it can also help eliminate the need to develop a unique companion diagnostic test for each new therapy," said Mr Rhodes.

"This collaboration with Pfizer and GSK enables us to build upon our market leading position in NGS oncology, with hundreds of customers around the world sequencing tens of thousands of tumor samples each month using Ion Torrent technology," said Mr Mark Stevenson, president of lifesciences solutions at Thermo Fisher Scientific.