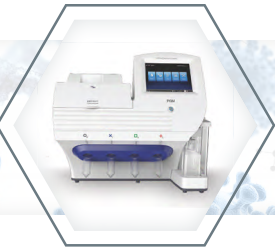


The history of Ion Torrent semiconductor sequencing



2010

The launch of the Ion Personal Genome Machine™ (PGM™) System, the first benchtop sequencer and product to use semiconductor sequencing technology, introduced unprecedented speed, scalability, and affordability.



2011

New Ion AmpliSeq™ technology enabled targeted next-generation sequencing (NGS) from as little as 1 ng of DNA or RNA. This highly multiplexed, PCR-based enrichment workflow drove quick adoption of NGS in the clinical research community.



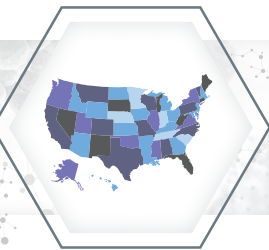
2014

The Ion Chef™ System introduced the first automated template preparation solution, reducing hands-on time to 15 minutes, with simple library preparation capability added in 2015.



2014

The Ion PGM™ Dx System became CE marked for *in vitro* diagnostic (IVD) use and was listed with the U.S. Food and Drug Administration (FDA) for clinical use as a class II medical device, enabling clinical laboratories to more easily develop and implement new NGS diagnostic assays.



2015

The National Cancer Institute (NCI)-MATCH trial generated sequencing data across multiple sites nationwide with the NCI-MATCH Trial Assay that was based on the 143-gene Ion Torrent™ OncoPrint™ Comprehensive Assay and used on Ion Torrent™ systems. The assay demonstrated high reproducibility and robust performance with very limited FFPE samples.



2016

The introduction of the Applied Biosystems™ Precision ID NGS System for human identification empowered forensic analysis labs to effectively retrieve more information from challenging samples.



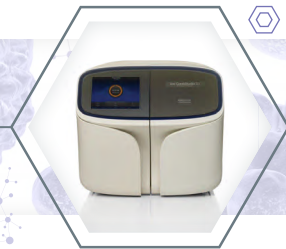
2017

The FDA approved the Ion Torrent™ OncoPrint™ Dx Target Test, the first NGS-based companion diagnostic test to simultaneously screen for multiple non-small cell lung cancer therapies.



2018

New Ion AmpliSeq™ for panels Illumina™ sequencing solutions enabled researchers to run Ion AmpliSeq panels on Illumina platforms and benefit from Ion AmpliSeq technology and its ability to deliver meaningful insights, even from difficult sample types.



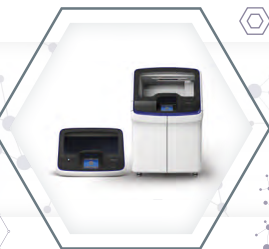
2018

The Ion GeneStudio™ S5 System series introduction provided unmatched flexibility and scalability enabled by five Ion Torrent™ chips to facilitate wide-ranging experiments on a single platform.



2018

Ion AmpliSeq™ HD technology was introduced as the first next-generation library preparation innovation able to deliver the flexibility to custom-design gene panels without sacrificing the ultra-high sensitivity required to find low-frequency variants in cfDNA and highly heterogeneous solid tumor samples.



2019

The first-of-its-kind Ion Torrent™ Genexus™ System automated the specimen-to-report workflow and delivered results in a single day* with just two user touchpoints, making in-house NGS more accessible.



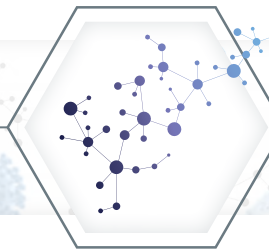
2020

LabCorp is set to adopt the Genexus System and OncoPrint™ Precision Assay for use in the research and development of companion diagnostics as well as other future oncology and precision medicine applications.



2020

The new Ion Torrent™ CarrierSeq™ ECS Kit consolidated a multiplatform approach to expanded carrier screening (ECS) into a single solution. This extended our NGS-based reproductive health research portfolio to include solutions for preimplantation genetic screening (PGS).



2020 and beyond

Connect with Thermo Fisher Scientific to keep up with the latest Ion Torrent technology innovations.



*Specimen-to-report workflow will be available after the Ion Torrent™ Genexus™ Purification System and integrated reporting capabilities are added in 2020. Fully integrated specimen-to-report workflow will be available after the Ion Torrent™ Genexus™ Software 6.4 update.

Find out more at thermofisher.com/iontorrent