Shaping Exome Sequencing

Term "exon" coined by biochemist Walter Gilbert **Agilent introduces** SureSelect Exon Plus, First description of a solution-based the 1st customizable capture method target enrichment solution Agilent introduces the industry's Gene for Miller Syndrome **1st** target enrichment solution: is found, marking the first SureSelect Human All Exon Kit successful identification of the cause of a Mendelian disorder Exome sequencing used to identify using exome sequencing 978 cause of Freeman-Sheldan syndrome, a proof-of-concept study that demonstrates this technology's potential for diagnosing genetic disease **Agilent introduces SureSelect Mouse All** First description of direct genomic Exon, the **1st** model organism exome selection protocol for target enrichment array-based capture First use of whole exome sequencing to diagnose and select treatment in a human patient

NIH launches the Mendelian Exome Sequencing Project to further knowledge of Mendelian heart disease

Agilent introduces the

1st commercial exome with
the capability to easily add
UTRs for translational research

Agilent introduces SureSelect Clinical Research Exome, the **1st** and most comprehensive medical exome solution

Whole exome sequencing of circulating tumor cells (CTCs) in prostate cancer patients provides foundation for exome sequencing of CTCs in the clinic

Agilent introduces SureSelect^{QXT}, the **1st** library prep enabling a revolutionary streamlined workflow with 90-minute hybridization

Largest database of human exome sequence data compiled as a resource for research and diagnosis

Agilent introduces OneSeq, the **1st** commercial NGS kit allowing to call confidently CNVs, SNPs, indels & LOH in a single assay

2016

2015

Agilent introduces
HaloPlex^{HS}, the **1st**commercial product
using molecular barcode
to allow high sensitivity
detection of rare variants

2017

Agilent introduces the **1st** hybridization-based kit with molecular barcodes: SureSelect^{XT HS} enabling rare variant detection

Agilent introduces the **1st** rat exome, expanding their portfolio of model organism exomes (zebrafish, bovine, canine)

2013

Published paper reveals origin of most human protein-coding variants based on analysis of 6,515 exomes

 SureSelect becomes compatible with multiple sequencing technologies

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