The ongoing fight against infectious diseases

Understanding the mechanism of infection by SARS-CoV-2 has been critical to developing vaccines at unprecedented rates.

Many of the successful approaches for vaccine development rely on recombinant DNA technologies, and synthetic DNA provides researchers with fast and highly reliable access to genetic material. **Invitrogen[™] GeneArt[™] Gene Synthesis Services** has been at the forefront of making synthetic DNA accessible to help in the fight against infectious diseases.

The first Zaire ebolavirus Two US patents are awarded constructs are produced. for the protection of specific, 2020 custom-designed HIV gene <u>2012</u> 2014 2015 sequences for development of therapeutics or vaccines. The first SARS-CoV constructs are supplied to the scientific community. 2009 2005 2007 2008 In response to the Ebola crisis January 2020-GeneArt Gene in West Africa, thousands of Synthesis Services produces genes constructs of Ebolavirus are based on SARS-CoV-2. The produced using GeneArt Gene constructs are prioritized and Synthesis Services. delivered with the GeneArt Express delivery service. GeneArt Gene Synthesis 2000 2005 2003 Services become part of March 2020-Synthesis of all Thermo Fisher Scientific as constructs related to SARS-CoV-2 GeneArt Gene Synthesis a crucial scientific offering. are prioritized for express delivery Synthetic H1N1 genes are Services are utilized within for the scientific community at no created for a top pharmaceutical the EU FP7 project additional charge. company, and GeneArt Gene "EuroNeut: New HIV vaccines Synthesis Services are utilized inducing broadly reactive December 2020-The first within the EU FP7 project neutralizing antibodies." SARS-CoV-2 variants are received. "CUT'HIVAC: Cutaneous and prioritized, and produced with the mucosal HIV vaccination." GeneArt Gene Synthesis GeneArt Express delivery service. GeneArt Gene Synthesis Services synthesizes a Services are utilized within recoded HIV gag. the EU FP6 project "DecVac: Development of a dendritic cell-targeted HIV vaccine."

Middle East respiratory syndrome coronavirus

(MERS-CoV) is identified, and hundreds of related

constructs are produced

using GeneArt Gene Synthesis Services.

Thermo Fisher SCIENTIFIC

To support the fight against Zika fever thousands of Flavivirus constructs are produced using GeneArt Gene Synthesis Services.



January 2021 – An ultrafast manufacturing process for SARS-CoV-2 spike variants is launched for timely development of new SARS-CoV-2 vaccines.

February 2021 — The GeneArt Gene Synthesis Services reaches the milestone of producing 10,000 SARS-CoV-2 gene constructs.

invitrogen