

DNASCRIP

DNA Script Exclusively Licenses baseclick GmbH Technology to Enable Benchtop Printing of Modified DNA On-Demand

PARIS and SOUTH SAN FRANCISCO, Calif., February 23, 2021 — DNA Script, SAS, a leading pioneer in enabling DNA synthesis on demand, and baseclick GmbH announced today an exclusive licensing agreement that grants DNA Script use of the novel “Click” chemistry commercialized by baseclick. In effect, this agreement enables DNA Script’s customers to enzymatically synthesize high purity nucleic acids with modifications using their SYNTAX™ DNA printing system.

Click chemistry was originally developed by scientists at The Scripps Research Institute¹ as a simple and easy way to chemically add modifications, like dyes, onto biomolecules. baseclick expanded the utilization of Click technology by linking moieties onto nucleic acids. The terms of the agreement allow for DNA Script to sell reagent kits with baseclick’s technology², thus enabling customers to modify the nucleic acids they print with their SYNTAX system. The Click chemistry can be used to add dyes, quenchers, proteins, sugars and other biologically relevant modifications onto DNA to support use for research and diagnostic markets.

"We see the use of baseclick-enabled oligo modification as a key element to enable broad use of enzymatically synthesized nucleic acids. This exclusive license will help DNA Script strengthen its unique IP portfolio in the field," said Thomas Ybert, Ph.D., co-founder and CEO of DNA Script. "By enabling high quality oligo labeling inside of our enzyme-powered systems, we are improving *de novo* nucleic acid synthesis performance compared to current technologies. In particular, we expect the combined offering to be game changing for diagnostic assay developers, who presently wait for weeks to secure what we can print in hours when powered by baseclick technology."

baseclick CEO and scientific leader Thomas Frischmuth, Ph.D., said, "The new oligonucleotide synthesis method of DNA Script will open up new applications in research and diagnostic fields. baseclick’s specially adapted Click chemistry methods for nucleic acid modifications are used in fields such as cell proliferation assays, NGS sequencing methods and mRNA drug development. DNA Script oligo synthesis and baseclick’s nucleic acids modification methods will bring nucleic acids applications to a new level."

DNA Script has already started working with diagnostic assay developers to enable the manufacturing of a broad range of modified DNA products, such as qPCR probes. In particular, the company recently [announced](#) a first \$1.6M deal with the French Department of Defense. For this project, DNA Script will adapt its SYNTAX platform to enable the synthesis of the DNA reagents such as qPCR probes, required in PCR-based molecular biology diagnostics.

As the field of genomics accelerates, innovative technologies are driving advancements in life sciences research and diagnostics development. The market for synthetic nucleic acids has expanded to over \$1.5 billion per year globally, but the demand is not always met with the existing service-focused business model. The Covid-19 pandemic has exacerbated these issues. For the past 50 years, synthetic DNA has been manufactured through a complex, hazardous chemical process with limitations in quality, turn-around time, and manufacturing

flexibility in a primarily service-based business model. In contrast, DNA Script's benchtop SYNTAX system mimics the way nature produces genetic code by employing highly efficient enzymes for on-demand DNA and RNA synthesis.

¹ H. C. Kolb; M. G. Finn; K. B. Sharpless (2001). "Click Chemistry: Diverse Chemical Function from a Few Good Reactions." *Angewandte Chemie International Edition*. 40 (11): 2004–2021. doi:10.1002/1521-3773(20010601)40:11<2004::aid-anie2004>3.3.co;2-x.

² M. Kollaschinski, J. Sobotta, A. Schalk, T. Frischmuth, B. Graf, S. Serdjukow (2020). "Efficient DNA Click Reaction Replaces Enzymatic Ligation." *Bioconjugate Chem.* 31 (3): 507–512. doi: 10.1021/acs.bioconjchem.9b00805.

About DNA Script

Founded in 2014 in Paris, DNA Script is a disruptive DNA synthesis company engineering biology to accelerate breakthroughs in life science. The company is pioneering an alternative to traditional DNA synthesis called enzymatic DNA synthesis, or EDS, making this technology accessible to labs with the world's first benchtop enzymatic synthesis instrument, SYNTAX™. By putting DNA synthesis back in the lab, DNA Script is transforming life science research through innovative technology that gives researchers unprecedented autonomy. www.dnascript.com.

About baseclick GmbH

baseclick GmbH, based in Neuried, near Munich, is a leading biotechnological company and founded in 2008 as a spin out of the Ludwig Maximilian University of Munich by Prof. Dr. Thomas Carell. The basis of baseclick's foundation is "Click chemistry," discovered by the Nobel laureate in chemistry Prof. Dr. Barry Sharpless. The technology is used in many products, such as cell proliferation kits, modifications of oligonucleotides, labelling of nucleotides for the "Next Generation Sequencing" (NGS) method, NGS diagnostic applications and the development of RNA-based drugs, among other things. Since April 2020 baseclick has initiated a Covid-19 vaccine development based on a Click chemistry sugar-modified mRNA. www.baseclick.eu

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