







# Rise of Gene Synthesis Industry and its Impact on Science and Business

DNA printing is a process of artificial construction of segments of genetic material.

Using DNA printing, researchers can generate customized or designed DNA

sequences that can be inserted into cells to alter their function or produce useful molecules such as proteins. In recent years, DNA printing companies have

benefited from advances in DNA sequencing and DNA construction technologies

that have made the process more automated, scalable, and affordable.

This has

allowed the rise of an entire industry focused on providing synthetic genes and

DNA to scientific and industrial clients.

## Rise of Commercial DNA printing Companies

The last decade has seen an explosion in the number of companies offering DNA

printing services. Early companies such as GeneArt (acquired by Thermo Fisher

Scientific) and DNA 2.0 (acquired by Eurofins) helped prove the commercial

viability of DNA printing. Since then, numerous other companies have entered

this space, such as GenScript, Integrated DNA Technologies (IDT), Twist Bioscience, Synbio Technologies, and more. These dedicated DNA printing firms

employ modern automated technologies like oligosynthesis and DNA assembly to

generate customized genes for tens of thousands of clients worldwide.

Their

services range from simple gene fragments to complex multi-gene constructs and

even entire synthetic genomes.

## Impact on Biological Research

### [Gene](#)

[Synthesis](#) has radically transformed the way biological research is conducted. It has eliminated many bottlenecks by allowing researchers to outsource DNA construction rather than rely on traditional cloning methods.

Synthetic genes have enabled entirely new types of research in synthetic biology, genetic engineering, and systems biology that were previously infeasible. From rewriting genetic codes to synthesizing artificial life, DNA printing is playing a key role in pushing the boundaries of our understanding

