



ATG:biosynthetics  
**Solutions**  
in biosynthetics

**CODON NEWS**  
Issue 51

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## Functional arrangements of Synthetic Genes is our business.

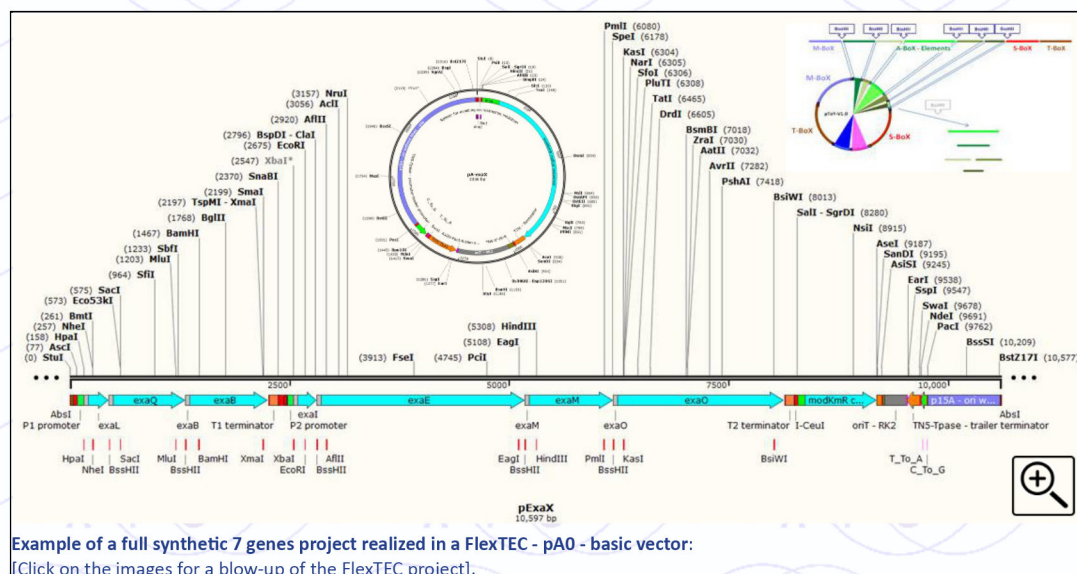
Dear customers,

ATG:biosynthetics is specialized on [Constructive Bioinformatics](#) at its Best.

### Analytical Comparative Genomics:

We are preparing analytical data from genomic background of the system of choice for improving both regulation and expression of your synthetic constructs.

- I. Molecular evidence based annotation of regulatory sequences and coding sequences by comparative genomics.
- II. Rational *in silico* screening, selection and choice of candidate genes suitable for application developments
- III. Comparative pathway analyses in detail and identification of genes of interest with function of interest e.g. catalytic
- IV. RNAseq analyses and expression profiling – MS - analyses of primary and secondary gene products
- V. Highly functional codon tables according to the requirements of your production system



### Constructive Bioinformatics:

We are using all knowledge published and data bases for

- I. GeneCheck services (or analyzing critical functional and structural gene parameters)
- II. Transcription Initiation (Promoters)
- III. Translational Initiation (RNA secondary structures, ribosomal accessibility, artificial Shine-Dalgarno Sequences etc.)
- IV. Translational Elongation (Adaptive codon enrichment, CAI, slow codon cluster conservation, RNA secondary structures in CDS etc.)
- V. Terminator screening on plausibility of nano-architecture, stem strength and abortion sequences etc.
- VI. Complex gene arrangements with different modes for assembly, recombination etc.
- VII. Development of molecular tools

functional gene co-expression in gene clusters coding for e.g.

- Hetero-Protein Complexes in combination with reporters tags localization signals whatever you need.
- Artificial signaling pathways
- Artificial biochemical pathways
  - Anabolic pathways for the production of natural compounds, chemical building blocks, fine chemicals bio-fuels etc.
  - Katabolic pathways for genetic engineering of bio-refining and bio-remediation processes

**We are realizing your desired GeneCluster - Designs into real DNA – ready to use hardware.**

**Our Support is Your Win. Your Choice: Our - Mode of Action!**

For more information or a quote, just ask our experts at  
<https://www.atg-biosynthetics.com/Optimizations/InfoRequestOpt.html>  
or give us a call: +497618889424

**ATG:biosynthetics ... experts in synthetic biology and bioinformatics**