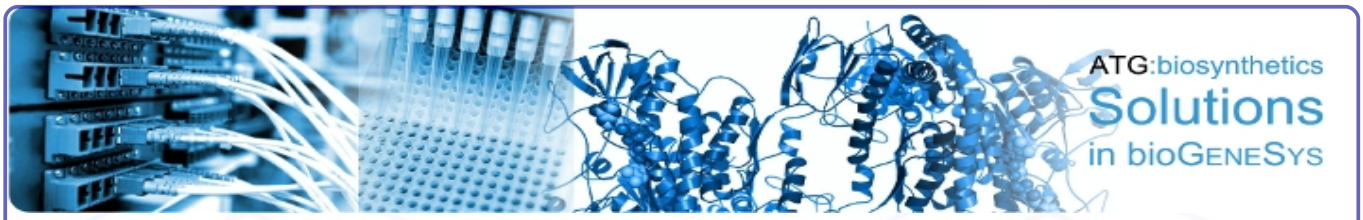

CODONEWS Issue 33

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ATG's biocomputational tools, analyses and services for your bioengineering projects

Crank up your output a notch or two: ATG's comprehensive *in silico* / biocomputational tools and analyses for your:

- multi-gene expression construct design
- pathway engineering for industrial biotech applications, e.g. natural product synthesis in heterologous production hosts
- other metabolic engineering projects

Detailed genomic and metagenomic analyses and reports to show you which settings you can adjust to potentially improve production in your production host.

Fully annotated reports serve as a basis for promoter (or other) re-designs or construction of **artificial promoters** for your expression host of choice.

We can then smoothen out any wrinkles in the design and the compatibility of genetic elements with our in-house **gene intelligence tool *Evo*MAG**. Our biocomputational gene design and optimization expertise and tools will help you in your **metabolic engineering** or **protein expression** projects.

Finally, obtain the tangible plasmid constructs by using our **gene synthesis service**.

Gene Analysis, Gene Design / Optimization and Gene Synthesis - from your reliable partner ATG:biosynthetics!

Comparative genomic promoter analysis using RNA-seq data to identify predictive sequence parameters that indicate promoter strength and can be used for a subsequent de novo design of an artificial promoter in combination with suitable 5'- and 3'-UTR sequences for an **industrial biotechnology** project.

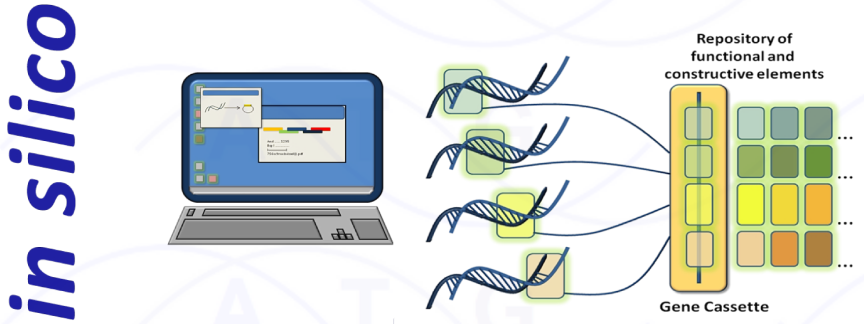

Figure 1: In silico analyses, e.g. detailed promoter comparisons, complement ATG's biocomputational prowess in gene design and gene optimization. If you click on the image, you will find examples of parameters we can analyze and optimize.

Find a sample page of an in-depth analysis of genomic data and a literature survey for prokaryotic promoter variants and sequence features for, among other things, **predictive transcriptional initiation frequency designs**.

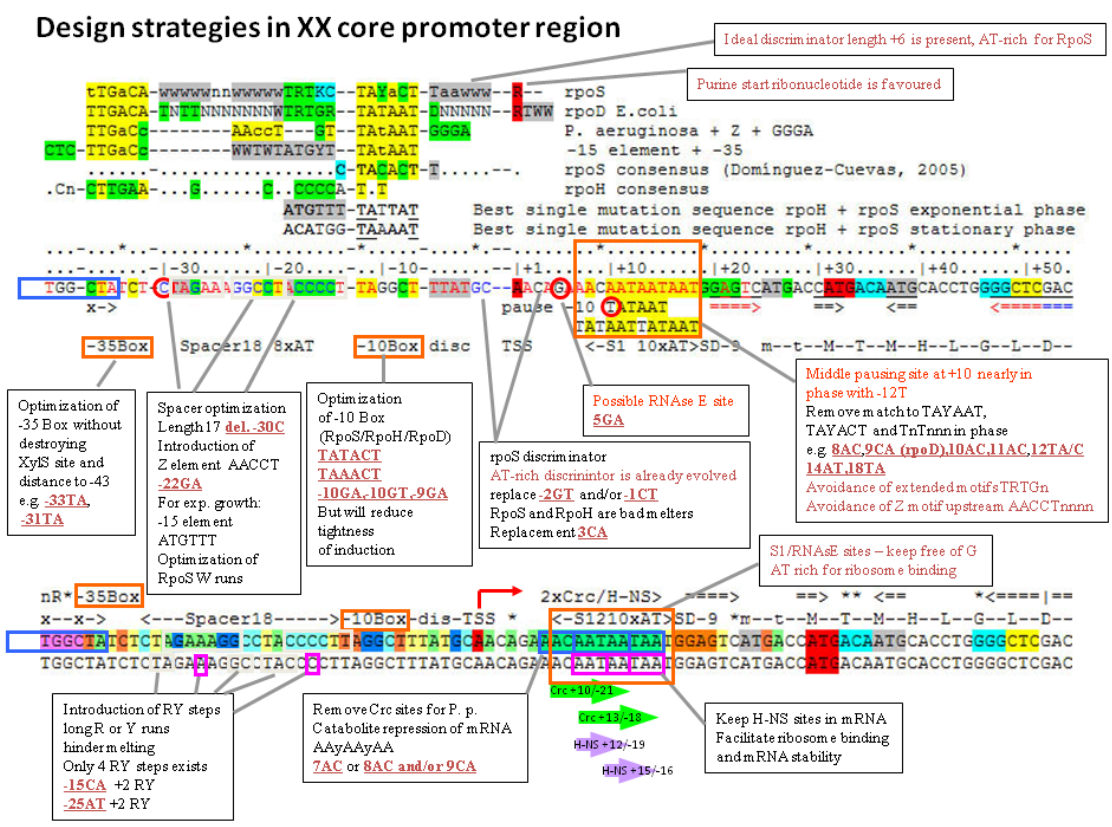

Figure 2: Example of an annotated promoter comparison from a potential production microorganism.

ATG:biosynthetics can do this and much more for you.

INQUIRE/ORDER For more information, just ask our experts or call us!

ATG:biosynthetics ...
experts in synthetic biology, multi-protein/peptide expression technologies & synthetic bioinformatics