ardigen

Artificial Intelligence & Bioinformatics
for Precision Medicine

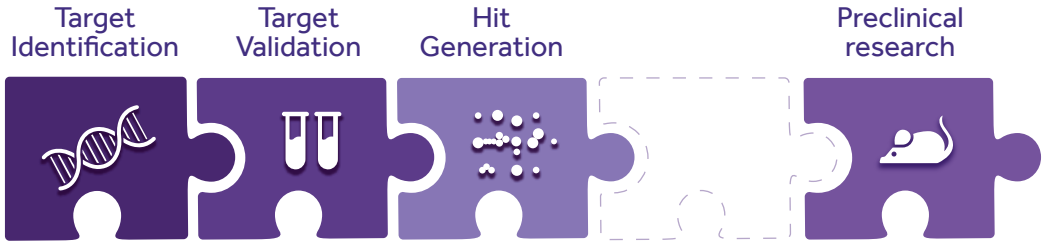
GENE REGULATION PLATFORM

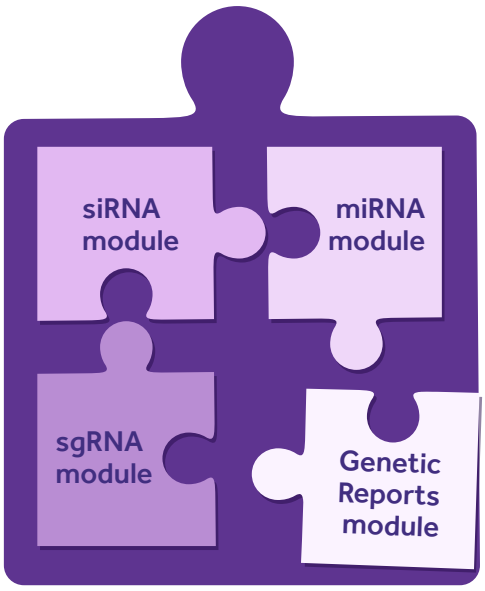
Arrive at validated target earlier

Laboratory validated platform
to accelerate your pipeline and reduce costs

Gene Regulation Platform **accelerates drug discovery** from target identification to the preclinical stage.

DRUG DISCOVERY PROCESS





Ardigen's Gene Regulation Platform is a suite of powerful in silico and machine learning-driven tools providing variety of options for constructing modulation strategies of your target genes.

- **saves money**
- **saves time**
- **valitated in the lab**
- **scientifically proven**

Watch a short video about Gene Regulation Platform

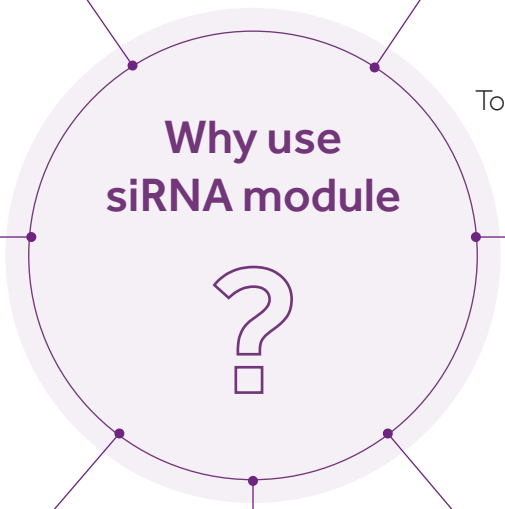
Speed up your **siRNA** research

siRNAs are easy to use, fast and proven technology to achieve temporary knock-downs. They are practical for studying phenotypic effects and can be also potentially used in patients with minor modifications.

Your goals and cases

Achieve an effective knockdown in a screen against a large population of genes in a cost-effective manner.	The laboratory setup limitations allowed only to use short RNA: siRNA, shRNA or miRNA.	Design molecules that are active across multiple species to perform experiments in animals, while having the possibility to use the same sequence in patients.

Why use siRNA module



To design **molecules effective in patients** and in model organisms.

To design **siRNAs targeting multiple isoforms** of the gene.

To **lower the number of laboratory experiments** needed to achieve satisfactory results.

To **use provided tissue expression information** to take into account tissue-specific impact of the induced gene knock- down.

To **eliminate the off-target action** at the design phase.

To select **highly efficient siRNA molecules.**

To consider the **effect of SNPs on siRNA knock-down** in humans.

Adjustable and comprehensive interface

Value we deliver

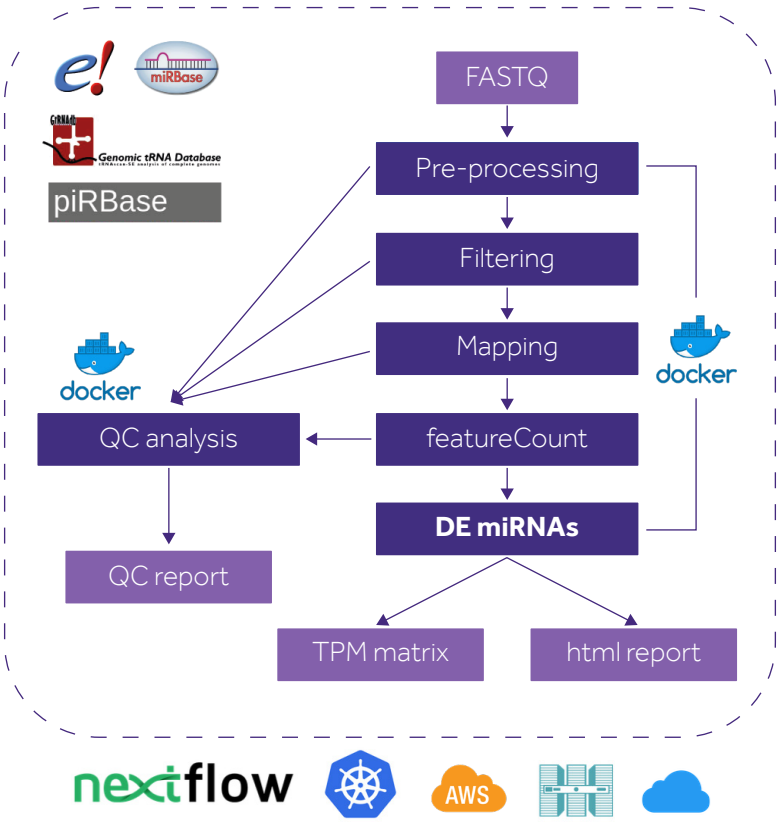
- State-of-the-art predictions for siRNA efficacy (AUROC of 0.83).
- Information on genetic variants that can affect knock-down efficiency.
- Efficient, fast and scalable database with straightforward API access.
- Easy to use interface with fast response time and modern look.

One step for **miRNA** function discovery

Our microRNA module allows for comprehensive understanding of the small RNA environment present in the cell. While analyzing all major small RNA types, its performance really shines in respect to microRNA, where it provides detailed information on detected changes and their functional consequences.

Your goals and cases

Detect all major classes of small RNAs present in the sample.	Understand microRNA composition of the sample and analyze their downstream action through miRNA target analysis.	Predict functional consequences of detected changes in small RNA populations	Validate the results of experimental perturbation targeting any small RNA class.



nextflow AWS

Value we deliver

- Scalable and reproducible cloud-enabled pipeline.
- Detection of all major small RNA classes (tRNA, rRNA, piRNA, miRNA).
- Analysis of the cellular microRNA pool, along with isomiR characterization.
- miRNA set enrichment analysis.
- microRNA target site analysis.
- Detailed report generation.

The easier way to design **sgRNAs**

The sgRNA module allows the design of highly efficient and specific guides for the use in CRISPR experiments. Powered by latest advancements of knowledge about guide strand design, it enables for effective engineering of knock-out, knock-down or activation and overexpression strategies in rapid and cost-conscious manner.

Your goals and cases

Select druggable gene targets associated with a specific indication.	Generate biologically-relevant disease models in experimental animals.	Efficiently screen multiple genes to identify promising candidates for small molecule design.	Validate therapeutic benefit of targeting selected genes.

Why use sgRNA module ?

To select the **most effective sgRNAs.**

To **enhance the success rate** of your drug discovery phase.

To **reduce** the number of **expensive and time consuming experimental trials.**

To precisely **engineer the genome** to the highest accuracy required in medical trials.

To select candidate **sgRNA with minimal off-target effects.**

Value we deliver

- Greatly enhanced success rate of drug discovery leading to greater number of better-validated targets entering late stages of developement.
- Precision editing capabilities and minimal off-target effects
- Leveraging the power of *in silico* prediction using the latest design algorithms.
- Our top-quality sgRNA, guide design strategies, and optimized protocols yield consistent and reproducible results.
- Unparalleled disease model generation.

Genetic Reports
- all information about your target gene in one place

Genetic Reports module is a custom service for made-to-order reports about specified gene of interest. It is an extensive summary of variant and phenotype information, sourced from large number of databases, as well as up-to-date literature information. These comprehensive reports have in the past lead to discoveries that were decisive for further use of the potential targets.

Your goals and cases

Justify the importance of a target candidate.	Incomplete information on genetic landscape of a target gene or a gene family.	Incomplete information about distribution of variants in the target gene within particular populations.	Requirement of side-by-side comparison of genetic information originating from specific public resources.

Why use Genetic Reports module

To learn about all important **SNPs and variants of your gene of interest.**

To **save time and money** by gaining access to a 360-overview of the target at the decision stage.

To have a comprehensive **overview of phenotypic consequences of genetic variants.**

To retrieve **up-to-date literature data and genomic information** related to the problem.

Value we deliver

- Experts-curated, comprehensive and informative genetic overview available in one place.
- Ability to form novel hypotheses and identify new promising targets.
- Close link between summary narrative and the underlying raw data.
- Interactive report with sortable tables and exportable publication-ready charts.

CLICK HERE

TO ACCESS SAMPLE REPORT

CLICK HERE

PLATFORM DEMONSTRATION VIDEO

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for Precision Medicine

DIGITAL CRO

Digital Drug Discovery
in the era of Artificial Intelligence

- Bioinformatics
- AI / Data Science
- Software Engineering

BIOMEDICAL IMAGING

Extract more from images
to drive drug discovery

- Image-based profiling
- Predictive phenotypic signatures
- Image-based biomarkers
- Novel clinical endpoints

MICROBIOME

Decoding the microbiome
with Artificial Intelligence

- Biomarkers
- Function Discovery
- Microbiome target identification
- Microbiome signatures

IMMUNOLOGY

Immunity by design
with Artificial Intelligence

- pMHC target identification
- Off-target toxicity prediction
- TCR-based therapies
- Cancer vaccines

180+
COMPLETED PROJECTS

45+
CUSTOMERS

110+
EMPLOYEES

One of the **Top 30** leading
AI Drug Discovery companies
in the world*

* according to the Deep Knowledge Analytics' report
www.ai-pharma.dka.global

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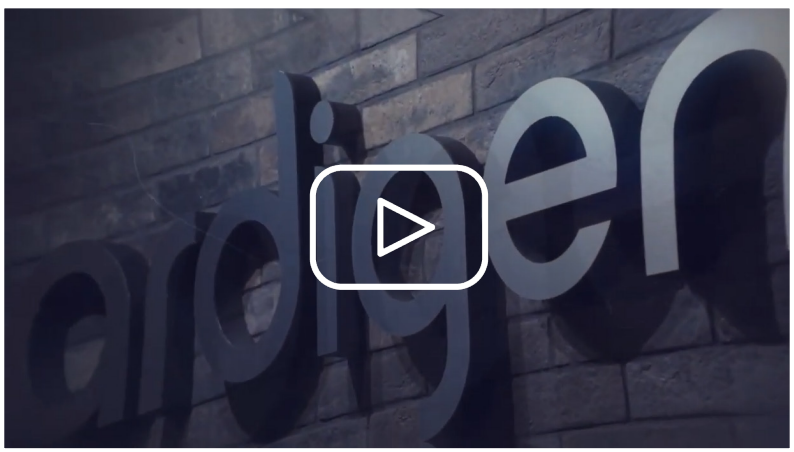

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