



AI platform for programmable DNA switches

AI that designs gene switches for precise
and safe cancer therapy



Problems and solutions

Problems



Expensive development – pharmaceutical companies spend millions of dollars on developing gene therapy drugs.



Slow development – creating DNA sequences for therapy takes months and years.



The tumor is changing – static structures quickly become obsolete.



Low accuracy – the therapy also affects healthy tissue.

OncoSwitch Solutions



Cost reduction – AI design and automation reduce R&D expenses.



Fast cycle – thousands of DNA sequences are tested in parallel over weeks.



Adaptive switches – AI learns from results and improves designs.



Programmable activity – DNA switches are activated only in target cells.

Our approach

AI and the laboratory form a single closed learning **cycle**.



Data → AI

Laboratory data trains models.

AI → Data

Models generate new DNA sequences.

Each cycle

Improves accuracy and reduces costs.

Result

A self-learning AI platform for creating DNA switches.

How the platform works

From idea to finished DNA switches through an iterative cycle.



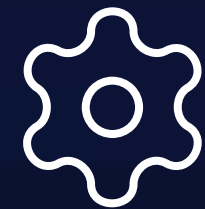
Problem statement

“Maximum expression in A, minimum in B.”



AI design

We generate thousands of sequences.



MPRA testing

Parallel activity verification.



Model training

We analyze the results and adjust the algorithms.



Redesign

We select the best options and start a new cycle.



Each cycle improves accuracy, reduces costs, and accelerates the development of genetic solutions.

Purpose of the platform

AI that designs
DNA switches.



What does

Analyzes how DNA controls genes in cells. Creates new sequences with the desired activity.



How it works

Compares tumor cells and normal cells. AI predicts where DNA should be turned on or silenced.



Why it is important

Accelerates and reduces the cost of development. Makes therapy more accurate and safer.

DNA



AI



Targeted Switches

Income model

Four revenue streams with a combined Biotech + SaaS model.

	Pilots	Subscriptions	Licenses	Libraries
Average check	\$225K	\$50K	\$0.5–1M	\$50–300K
Frequency	8/year	10/year	1–2/year	3/year
Potential	≈ \$1.8M/year	≈ \$0.5M/year	≈ \$1–2M/year	≈ \$0.6–0.9M/year
Total potential			\$3.9–5.2 million/year after 24 months	

Market potential

TAM
\$63B

SAM
\$28B

SOM
\$2.25B

Total Addressable Market (TAM):

APAC: ~\$10–15 billion / ~\$30–60 billion.

Middle East: ~\$0.46–0.69 billion / ~\$1.4–2.8 billion.

Total APAC+ME: ~\$10.5–62.8 billion.

Serviceable Addressable Market (SAM):

APAC: \$8.8 / 17.7 / 26.5 billion at 20/40/60%.

ME: \$0.70 / 1.40 / 2.10 billion at 20/40/60%.

Total: ~\$9.5 / 19.1 / 28.6 billion.

Serviceable Obtainable Market (SOM):

Start: ~2.5–3.5k patients/year $\Rightarrow$ ~\$0.43–0.58 billion/year.

Base: ~6.5k $\Rightarrow$ ~\$1.1 billion/year.

Apside: ~13k $\Rightarrow$ ~\$2.25 billion/year.

Our focus:

Cancer cell and gene therapy (**CAR-T/TCR and related therapies**) as the end market + parallel market for **development infrastructure** (platforms/software/outsourcing, technology transfer).

CGT scale - \$25–26 billion (2025)

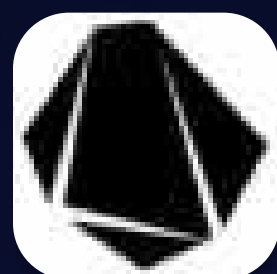
Competitive advantages

Competitors analyze data.
We create living genetic constructs.



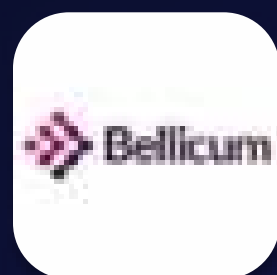
Senti Biosciences

Logic circuits/promoter logic for cell therapies.



Obsidian Therapeutics

Inducible expression control (inducer molecule, mbIL-15).



Bellicum Pharmaceuticals

Chemically inducible switches (e.g., iCasp9).

! From analysis → to creation

OncoSwitch creates a new category:
AI + laboratory = real biological solutions.



OncoSwitch

We don't analyze genes
– we program them



Combines AI and the lab into a single cycle.



Creates and tests real DNA switches.

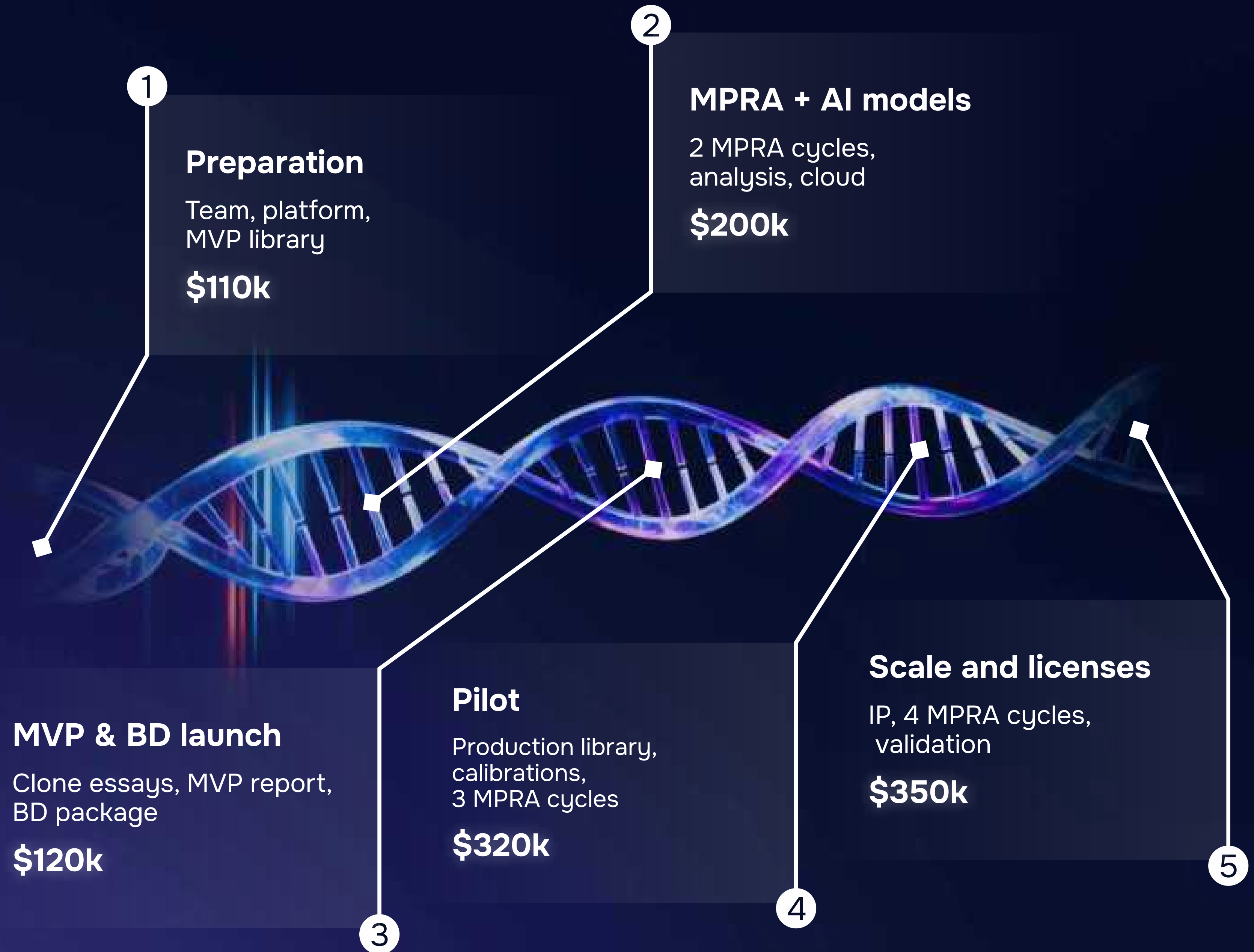


It provides not a prognosis, but a ready-made solution for gene therapy.

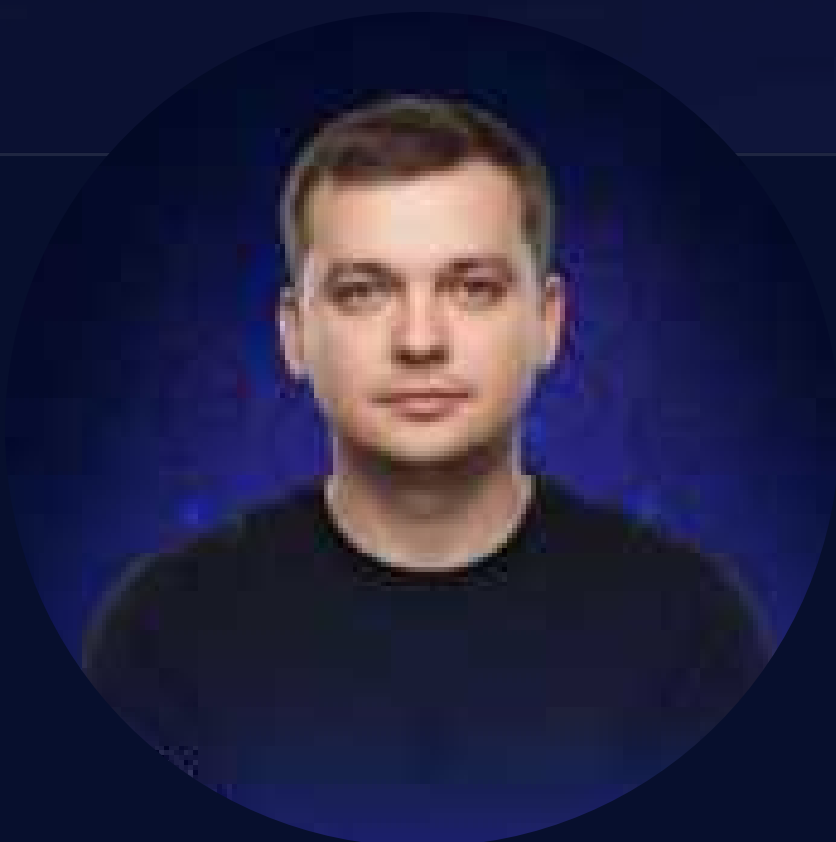
Funding & Milestones

\$1.1M

**Angel round
size**



Our team of experts



Dmitry Mikhailov 

Scientific Advisor

Supervising Professor at
Khalifa University

Head of Research at Abu Dhabi
Maritime Academy

AI Research Expert at
United Nations



Malika Gallyamova 

Founder & CEO

MSc AI & Computer Science,
University of Birmingham

Expert in networking and
communications

Experience managing teams
and complex processes



Vitalii Volkov 

Scientific CTO

MSc AI & Computer Science,
University of Birmingham

Graduate of Pirogov Russian National
Research Medical University

Senior Bioinformatician
at Genomed



Invest in OncoSwitch!

Nowadays, intelligence may be artificial,
but human life will always remain real.

Let's launch the world's first switch in
gene therapy together.