



FOR CGT DEVELOPERS AND PARTNERS

The **programmable control layer** for cell and gene therapies

Most cell and gene therapies fail because they cannot distinguish cancer cells from healthy tissue.

We are building programmable DNA switches that make therapies active only where they should.

Current problem: the industry burns billions on trials that fail for the wrong reasons



Expensive R&D programs

\$1–4M price tag per dose - costs of inefficient pipelines land on patients.



Precision remains the bottleneck

Up to 20–30% of patients face severe treatment-related toxicity



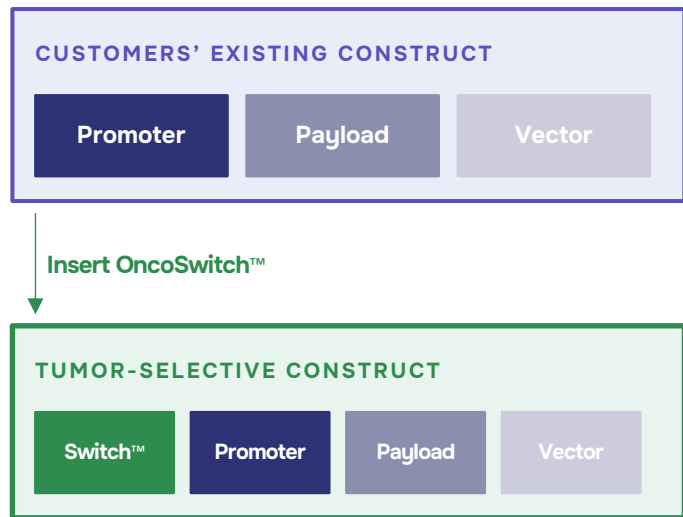
Drugs never reach patients

Only 1 in 16 Phase 1 oncology candidates reach approval (97% fail).

Better targeting means higher hit rates, lower R&D burn, and therapies patients can actually afford.

The solution: therapies that activate only in target cells

Sits upstream of your promoter – defines which cells transcribe the payload.



One small sequence, zero rewiring

A ~100–200 bp sequence slots in upstream of your therapeutic gene – no other changes needed.



Compatible with all major formats

AAV · Lentivirus · Plasmid · CAR-T · TCR constructs – any vector that expresses a gene.

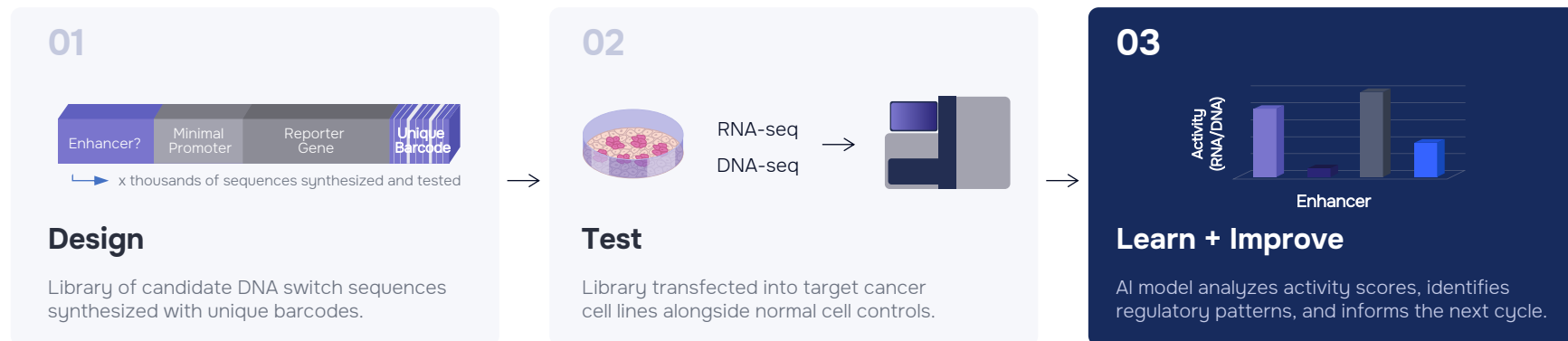


Your construct stays yours

We deliver the switch under a field-of-use license. Your therapeutic design and IP remain fully intact.

Our core platform model – AI + MPRA*

High-throughput method, in combination with our proprietary AI model, makes our platform possible – test thousands of DNA switches in parallel, not sequentially.



Validated in top journals –

MPRA is not experimental. It's the published, peer-reviewed method our CSO, Nadav Ahituv, helped pioneer.



Science

Early data: our prototype shows strong tumor selectivity

No large-scale dataset exists for tumor-selective gene regulation. We generate the data ourselves.

100%

Precision in top-ranked candidates

$r = 0.88$

Selectivity prediction
Pearson correlation

1,750

Sequences validated
on held-out test set

12×

Selectivity in
MPRA studies

PREDICTED ACTIVITY LANDSCAPE · HepG2 vs K562 (test set)

Top-20 model-ranked candidates (gold diamonds) cluster in the therapeutic window. All 20 confirmed positive-window hits.



Pilot design: what OncoSwitch builds and partners get

Proprietary closed-loop cycles applied to partner's construct – each stage benchmarked with concrete outputs



Milestones locked before day one. Your scientists in every review. Built around your therapeutic format

Timing: validated candidates in months, not years.

2–3
months
per MPRA cycle

1–4
cycles
depending on complexity

Traditional approach: 1.5–3 years

- X Empirical trial-and-error – one sequence at a time
- X High internal lab burden with frequent dead ends
- X Validated candidates often emerge too late for IND timelines

HOW EARLY ENGAGEMENT ACCELERATES YOUR PROGRAM

Cycle 1

Initial library
design & test

2–3 months

Cycle 2

Refinement &
optimisation

+2–3 months

Cycle 3–4

Lead sequence
selection

+varies

IND-Ready

Validated switch
delivered

**Earlier engagement = fewer cycles needed.
Bring us your indication at any stage and we'll calibrate the program to your timeline.**

Team: why we are built to win

MPRA, AI, regulatory genomics, BD and commercial leadership under one roof.



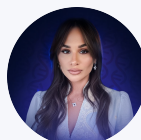
Nadav Ahituv, PhD

CSO, Founder

UCSF Director of Genomics – inventor of the MPRA methodology underpinning this platform.



[LinkedIn](#)



Malika Gallyamova

CEO, Founder

Company strategy, fundraising, and operational execution across fast-growing biotech ventures.



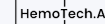
[LinkedIn](#)



Vitalii Volkov

CTO, Founder

Senior bioinformatician and co-architect of the AI/MPRA closed-loop engine.



[LinkedIn](#)



Ofer Yizhar-Barnea, PhD

VP of Biology

Biology operations lead with two prior founder exits/spinouts in genomics and diagnostics.



[LinkedIn](#)



Dexter Sugiono

Head of BD

11+ years at AstraZeneca in oncology new-product planning across 40+ markets.



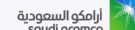
[LinkedIn](#)



Dmitry Mikhailov, PhD

Chief AI Officer

Professor of AI at Khalifa University and NUS; UN AI-governance expert since 2022.



[LinkedIn](#)

How can programmable expression unlock one of your programs?



Let's find where your program and our platform compound together.

contact@oncoswitch.ai

Partnering & investing welcome