

CAR-T • CELL THERAPY • IMMUNO-ONCOLOGY

Engineering the Next Generation of *Cellular Therapy*

Investigating programmable immune cells, advanced CAR architectures, and translational strategies for precision cancer immunotherapy.

EXPLORE OUR RESEARCH ▾

VIEW PUBLICATIONS →

CELLULAR INTERFACE • VISUALIZATION 01

RESEARCH FOCUS

Where Biology Meets Engineering

We study immune cells as programmable living systems—connecting molecular design to cellular function and translational potential.

 01 CAR Engineering Designing modular receptor systems that integrate specificity, signal control, and cellular state.	 02 T-Cell Biology Resolving the mechanisms that govern activation, memory, persistence, and exhaustion.	 03 Tumor Targeting Improving recognition and function across heterogeneous, immune-suppressive tumor contexts.
---	---	--

RESEARCH AREAS

An Integrated Research Program

01 Next-Gen CAR Design Modular receptors with tunable signaling, logic gating, and precise antigen sensing.	02 T-Cell Persistence Programming durable memory phenotypes for sustained anti-tumor surveillance.
03 T-Cell Exhaustion Mapping and reversing dysfunctional states in chronically stimulated immune cells.	04 Solid Tumor Targeting Increasing specificity, trafficking, and activity within complex solid tumors.
05 Tumor Microenvironment Engineering cellular resilience to suppressive metabolic and immune signals.	06 Cell Manufacturing Developing reproducible workflows for robust, functionally consistent products.

CELLULAR RESPONSE PATHWAY

From Recognition to Cellular Response

Follow the molecular sequence that turns engineered recognition into a precise cellular action.

01

Antigen Recognition

02

CAR Engagement

03

Immune Synapse

04

T-Cell Activation

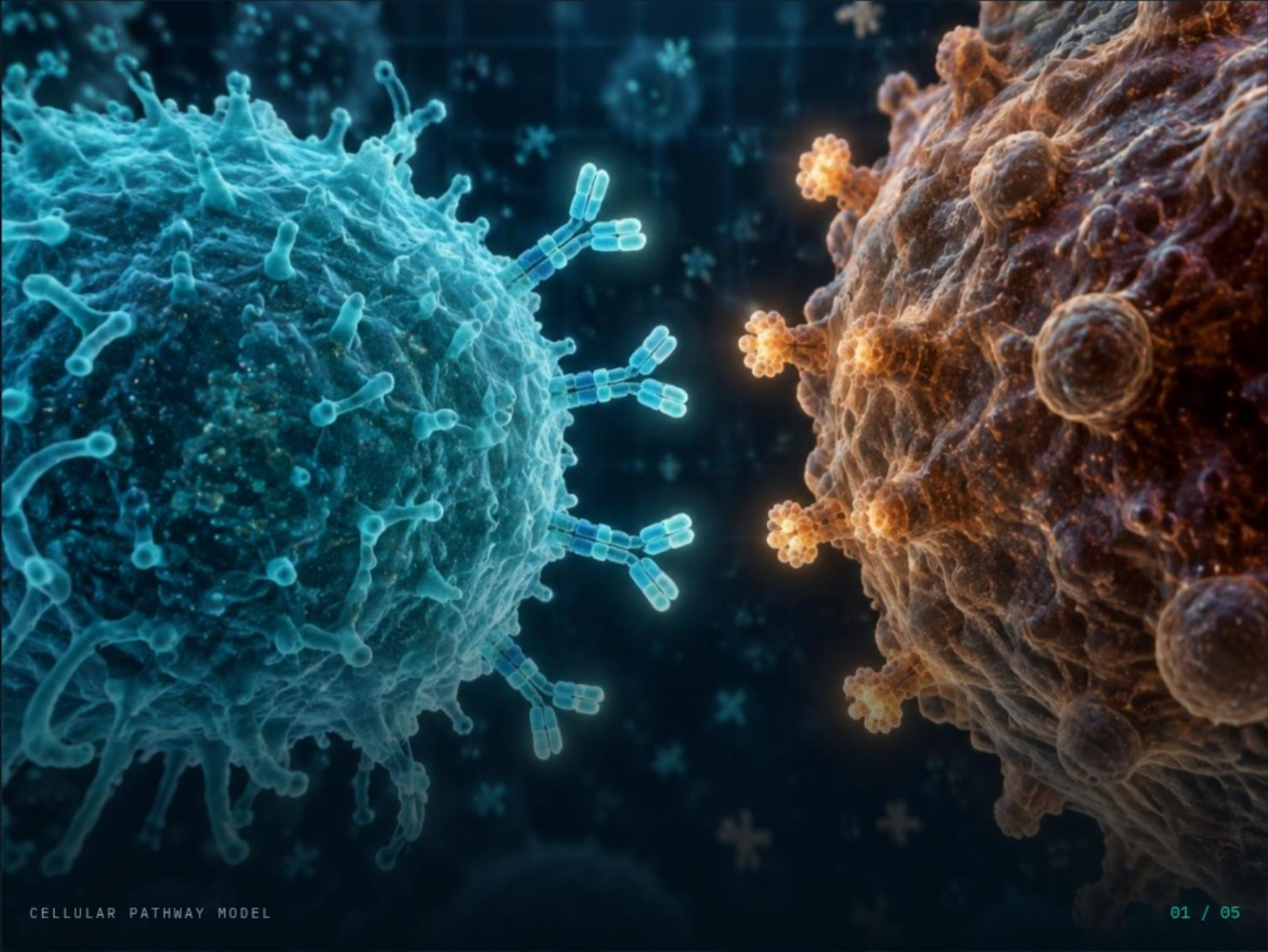
05

Targeted Cellular Response

STAGE 01

Antigen Recognition

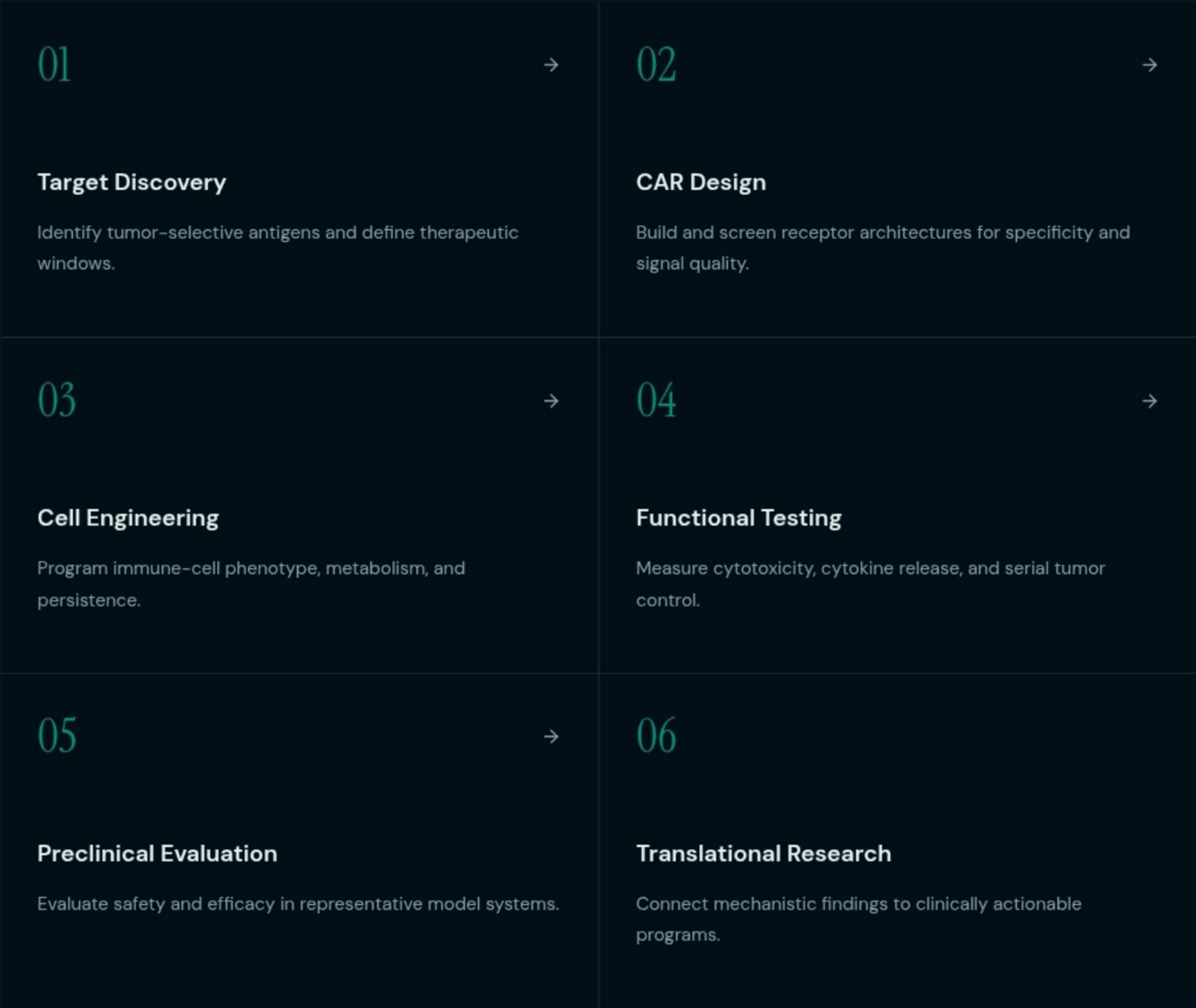
Tumor-associated antigens are detected with calibrated affinity and selectivity.



TRANSLATION FRAMEWORK

Our Research Pipeline

A rigorous continuum from biological insight to translational evidence.



SELECTED RESEARCH

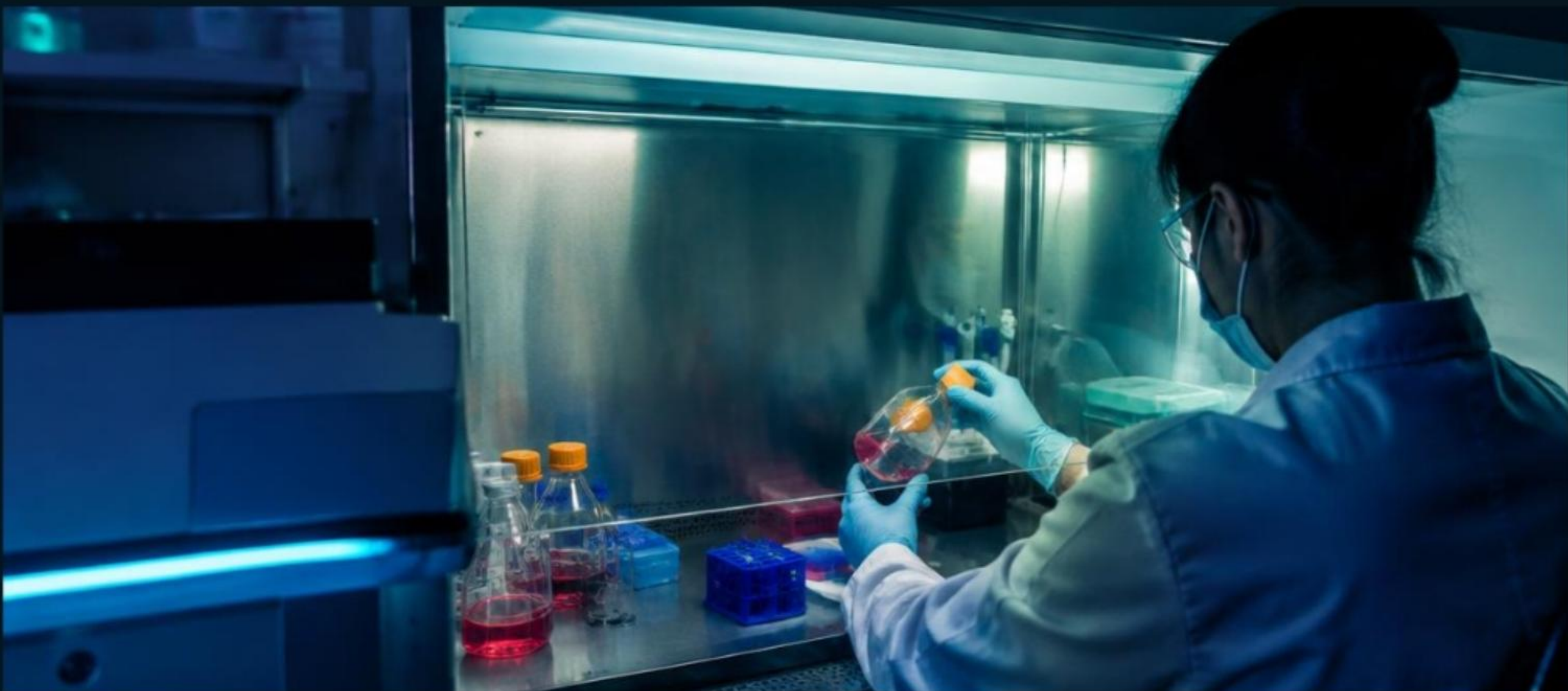
Publications & Scientific Contributions

Representative work from our fictional research program, presented as a production-ready editorial template.

2026	Logic-gated CAR architectures preserve T-cell fitness during chronic antigen exposure Cell Therapy Research · Vol. 14 · Issue 2 · 118–134	DOI 10.1847/ctr.2026.014 READ PUBLICATION ↗
2025	Metabolic state predicts durable response in engineered T-cell populations Immunity Systems · Vol. 9 · Issue 7 · 441–458	DOI 10.1847/ims.2025.097 READ PUBLICATION ↗

LABORATORY ENVIRONMENT

Where Discovery Takes Shape



Cell Culture

Controlled expansion and phenotypic programming



Flow Cytometry

High-dimensional immune-state characterization



Live-Cell Imaging

Real-time analysis of cellular engagement



Molecular Analysis

Mechanistic validation across molecular scales

RESEARCH TEAM

Built by Scientists, Guided by Biology



Dr. Elena Morgan

PRINCIPAL INVESTIGATOR

Cellular immunotherapy · CAR architecture



Dr. Daniel Chen

SENIOR RESEARCH SCIENTIST

T-cell signaling · Synthetic biology



Dr. Sofia Laurent

CELL THERAPY SCIENTIST

Tumor immunology · Cell manufacturing



Dr. Marcus Reed

COMPUTATIONAL BIOLOGY

Single-cell systems · Predictive modeling

12+

ACTIVE RESEARCH
PROJECTS

28

PEER-REVIEWED
PUBLICATIONS

7

CAR PLATFORMS

14

RESEARCH
COLLABORATORS

COLLABORATE WITH IMMUNOVA

Building the Future of Cellular Immunotherapy

We welcome research collaborations that connect fundamental immunology, synthetic biology, and translational science.

START A RESEARCH INQUIRY [➤](#)

Investigating programmable immune cells and next-generation strategies for precision cancer immunotherapy.

RESEARCH

Focus areas

CAR-T pathway

Publications

LABORATORY

Team

Collaborate

Research inquiry

FOLLOW

LinkedIn [➤](#)

ResearchGate [➤](#)

X [➤](#)