

## OBSIDIAN

**THERAPEUTICS** 

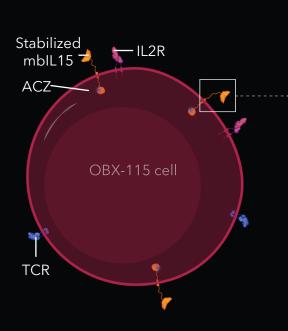
# Obsidian Therapeutics Engineered TIL OBX-115

**JULY 2024** 

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## mbIL15 Armoring Delivers a Superior Cell Therapy Product

OBX-115 is engineered with our proprietary mbIL15 gene construct with a flexible linker, which has unique signaling properties conferring the ability to drive both cis- and trans-cell activation



#### **Benefits of IL15**

#### **Drives antigen-independent proliferation of memory CD8+ T-cells**

Supports survival of CD8+ T cells without promoting terminal differentiation; Drives antigen-independent proliferation of memory CD8+ T cells 1,2

#### Sustains persistence and durable effector function

Provides efficient expansion of T cells without increasing cell exhaustion or compromising cytotoxicity <sup>3</sup>

#### **Drives cytokine production and cytotoxicity**

Sufficient to cause human memory CD8+ T cells to become highly cytolytic (increase perforin, granzyme B, IFNy) 4

#### mbIL15 trans-activation drives engagement of other immune cells (e.g., NK cells), potentially preventing tumor escape from MHC loss

Supports NK cell homeostasis and proliferation and supports the survival of activated NK cells 5; Shown to increase cell expansion and persistence of NK cell therapies <sup>6</sup>

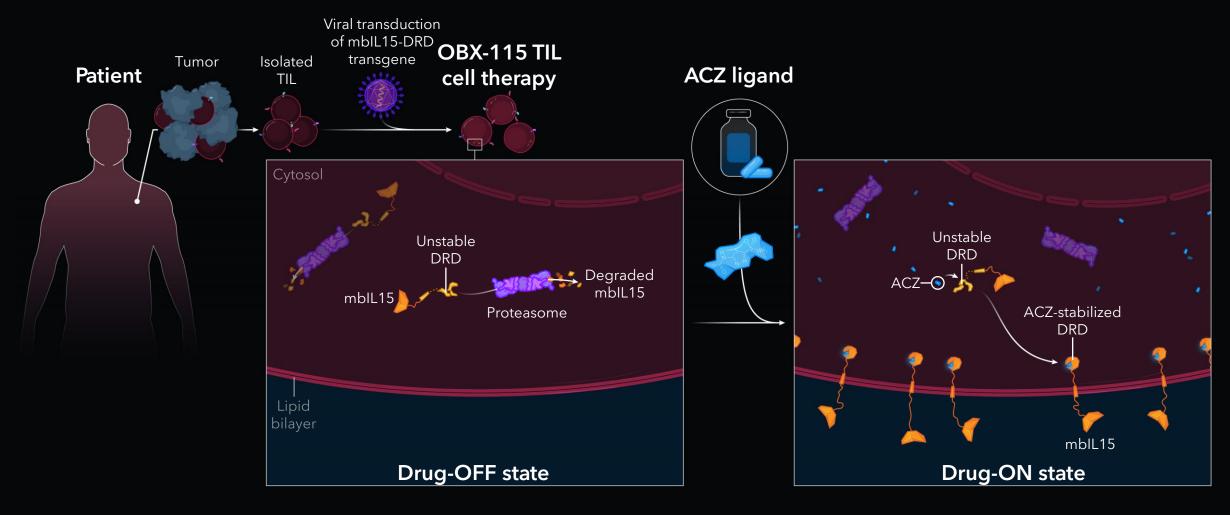
#### Does not support Treg development in the TME 7

Lack of Tregs decreases the risk of an immune-suppressive TME

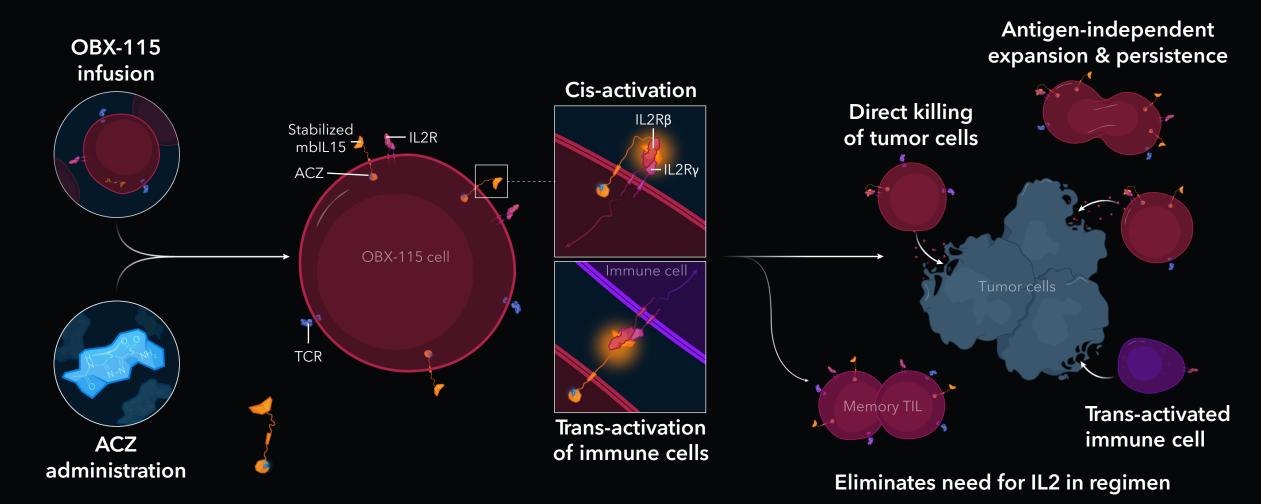
#### Potential for reduced-dose lymphodepletion

Reduced dependence on homeostatic IL15 increase after lymphodepletion to drive expansion <sup>8</sup>

## Leveraging Our cytoDRiVE® Platform to Regulate mbIL15 Activity Using the FDA-approved Small-molecule Drug ACZ



### **OBX-115: Addressing Limitations of Non-engineered TIL**



## Proprietary Manufacturing: mbIL15 Drives a CD8+ Enriched and Minimally Exhausted Product With Enhanced Memory Phenotype

CD8+ enriched, minimally exhausted OBX-115<sup>1</sup> product **Tumor tissue Optimized** Activation/ Proprietary, Cryo-**OBX-115** cell therapy regimen pre-REP transduction optimized REP preservation procurement Core needle biopsy Anti-CD3 Ab iFeeder cells supported expressing IL21 Retroviral vector and 4-1BBI ACZ (no IL2) Reproducible and consistent drug product Positioned to be scalable for commercialization **OBX-115 ACZ** infusion Lymphodepletion\* dosing

