UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): January 11, 2017

ZIOPHARM Oncology, Inc.
(Exact Name of Registrant as Specified in Charter)

Delaware	**001-33038**	**84-1475642**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

One First Avenue, Parris Building 34, Navy Yard Plaza Boston, Massachusetts	**02129**
(Address of Principal Executive Offices)	**(Zip Code)**

(617) 259-1970
(Registrant's Telephone Number, including Area Code)

Not applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425).

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12).

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b)).

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c)).

Item 7.01 Regulation FD Disclosure

On January 11, 2017, ZIOPHARM Oncology, Inc., or the Company, will present the attached presentation at the 35th Annual J.P. Morgan Healthcare Conference in San Francisco, California being held on January 9 – 13, 2017.

A copy of the above referenced presentation is furnished as Exhibit 99.1 to this Current Report on Form 8-K. This information, including the information contained in the presentation furnished as Exhibit 99.1, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not incorporated by reference into any of the Company's filings, whether made before or after the date hereof, regardless of any general incorporation language in any such filing.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No.	Description
99.1	Presentation of the Company dated January 11, 2017

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ZIOPHARM Oncology, Inc.

By: /s/ Kevin G. Lafond
Name: Kevin G. Lafond
Title: Sr. Vice President Finance, Chief Accounting Officer and Treasurer

Date: January 11, 2017

INDEX OF EXHIBITS

Exhibit No.	Description
99.1	Presentation of the Company dated January 11, 2017

Exhibit 99.1


ZIOPHARM Oncology
35th Annual J.P. Morgan
Healthcare Conference
January 11, 2017

Forward-looking Statements

This presentation contains certain ***forward-looking information about ZIOPHARM Oncology, Inc.*** *that is intended to be covered by the safe harbor for "forward-looking statements" provided by the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are statements that are not historical facts, and in some cases can be identified by terms such as "may," "will," "could," "expects," "plans," "anticipates," and "believes." These statements include, but are not limited to, statements regarding the progress, timing and results of preclinical and clinical trials involving the Company's drug candidates, and the progress of the Company's research and development programs. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied by, the forward-looking statements. These risks and uncertainties include, but are not limited to: whether chimeric antigen receptor T cell (CAR T) approaches, Ad-RTS-IL-12, TCR and NK cell-based therapies, or any of our other therapeutic candidates will advance further in the pre-clinical or clinical trials process and whether and when, if at all, they will receive final approval from the U.S. Food and Drug Administration or equivalent foreign regulatory agencies and for which indications; whether chimeric antigen receptor T cell (CAR T) approaches, Ad-RTS-IL-12, TCR and NK cell-based therapies, and our other therapeutic products will be successfully marketed if approved; the strength and enforceability of our intellectual property rights; competition from other pharmaceutical and biotechnology companies; and the other risk factors contained in our periodic and interim SEC reports filed from time to time with the Securities and Exchange Commission, including but not limited to, our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, and our Quarterly Report on Form 10-Q for the quarter ended September 30, 2016. Readers are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.*

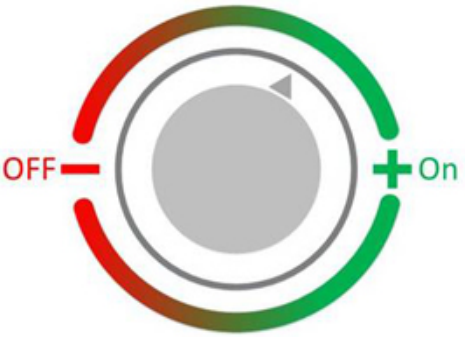
Cost and Control

The next generation of DNA-based immunotherapies will need to master cost and control

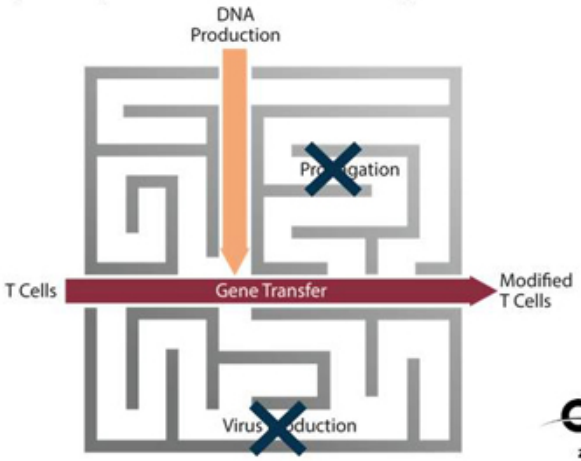
ZIOPHARM Oncology

ZIOPHARM Has Clinically-Validated Genetic Engineering Tools to *Increase Control, Reduce Complexity, and Manage Costs*

The RheoSwitch Therapeutic System® gene switch enables precise control over gene expression *in vivo*



Non-viral *Sleeping Beauty* system has the potential to eliminate many GMP steps in cell manufacturing *ex vivo*, thereby reducing complexity of manufacturing



ZIOPHARM Oncology

Addressing Unmet Medical Needs

Target		Indication	Preclinical	Phase 1	Phase 2	Pivotal
Ad-RTS-hIL-12	Multicenter	GBM				ATI001-102
		Breast Cancer			ATI001-203	
		Pediatric Brain Tumor				
		GBM & Checkpoint (PD-1)				
		Combination with OTS NK cells				
CAR	CD19 2nd Gen. shortened manufacture	Leukemia/Lymphoma		MDACC		
	CD19 3rd Gen. CAR with mbIL15 (POC)	Leukemia/Lymphoma		MDACC		
	CD33	AML		MDACC		
	Merck Target 1	Undisclosed				
	Merck Target 2	Undisclosed				
	POC	Hematologic				
NK Cells	Off the shelf (OTS) primary NK cells	AML		MDACC		
	Genetically-engineered	TBD				
TCR	*Sleeping Beauty* neoantigen	TBD		NCI		
	Sleeping Beauty neoantigen and cytokine	TBD				
Other	Regulatory T Cells	GvHD				
	Modified Bacteria (microbiome)	GvHD				

2017 1H 2017 2H 2017

ZIOPHARM Oncology

Control

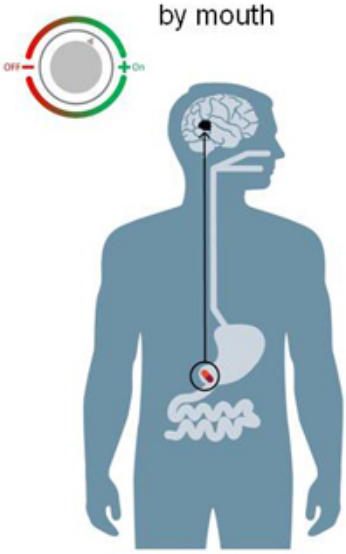
Ad-RTS-hIL-12 + Veledimex

ZIOPHARM Oncology

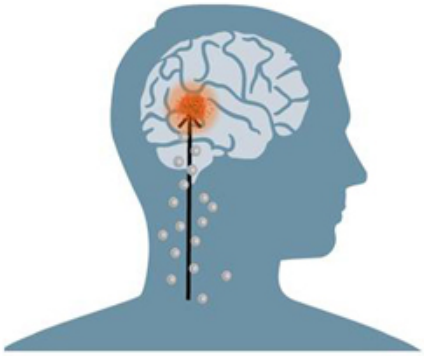
Control Using the RheoSwitch Therapeutic System® (RTS®)

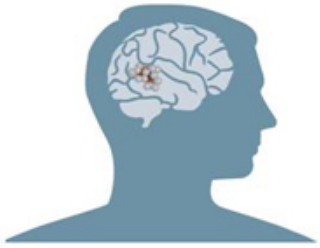
Intratumoral injection of Ad-RTS-hIL-12

Veledimex taken by mouth



IL-12 production calls in cellular immune response

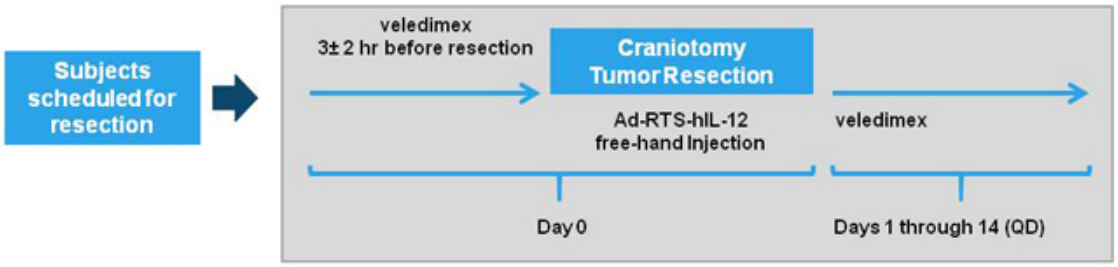




Cellular immune response shows durability beyond initial IL-12 signaling

ZIOPHARM Oncology

A Study of Ad-RTS-hIL-12 + Veledimex in Subjects With Recurrent or Progressive Glioblastoma



DANA-FARBER/BRIGHAM AND WOMEN'S CANCER CENTER

CEDARS-SINAI

UCSF

THE UNIVERSITY OF CHICAGO PRITZKER SCHOOL OF MEDICINE

Northwestern Memorial Hospital

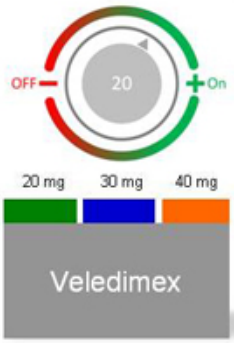
Ability to control IL-12 gene expression in multicenter study

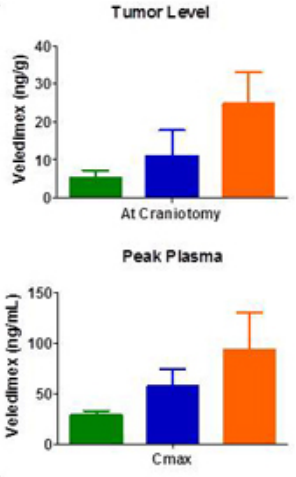
Clinicaltrials.gov: NCT02026271

ZIOPHARM Oncology

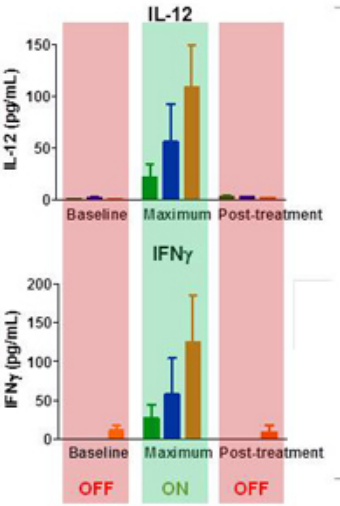
RTS® Switch Responds to the Presence/Absence and Dose of Veledimex in Recurrent or Progressive Glioblastoma Patients

Increase dose of oral ligand → Controls transcription → Proportional output and effects*





Crosses the blood-brain-barrier (BBB)



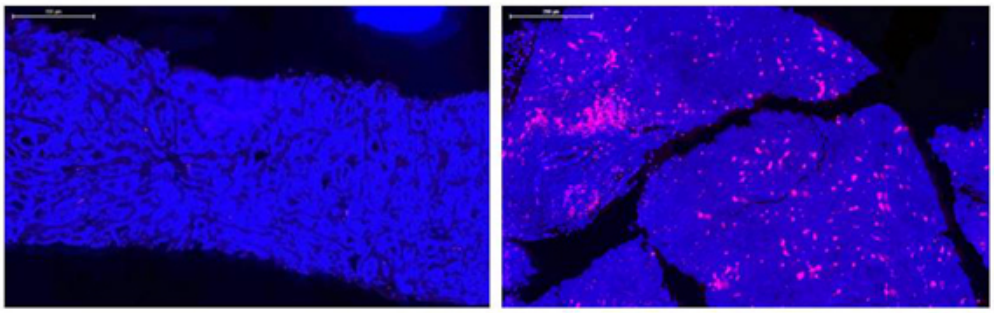
Serum

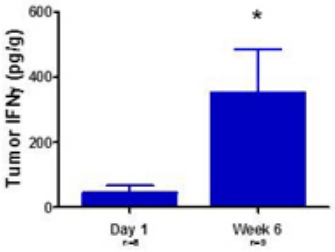
*As of October 14, 2016

ZIOPHARM Oncology

Ad-RTS-hIL-12 + Veledimex in Subjects With Breast Cancer: Positive Biomarker Data*

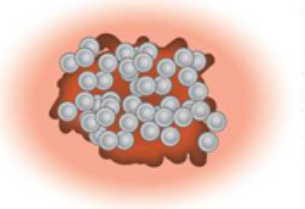
CD8+ T cells





Baseline: Cold Tumor

6 Weeks: Inflamed Tumor



*European Society for Medical Oncology 2016

ZIOPHARM Oncology

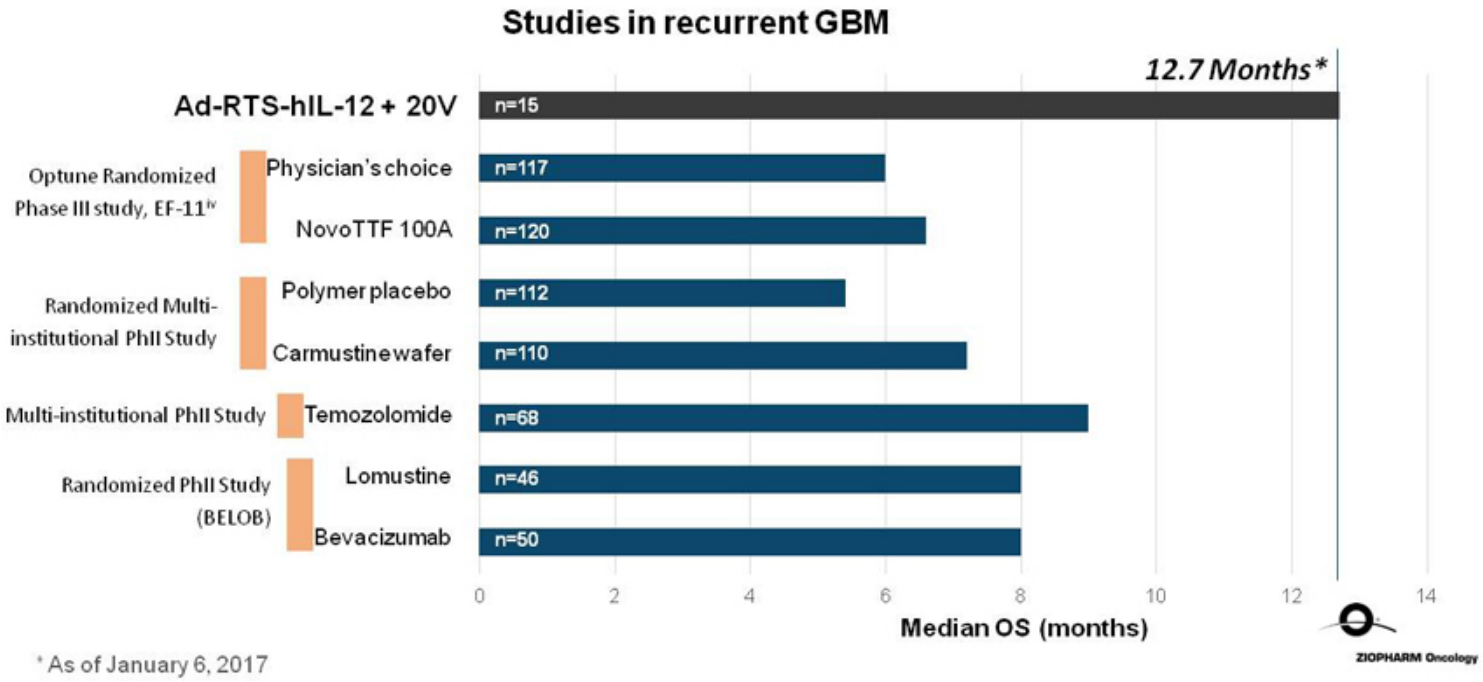
Interim Study Results

- Based on tolerability and survival benefit (median OS=12.7 months, n=15), 20 mg was selected for an expansion cohort and we are following patients' overall survival data*
- Ad-RTS-hIL-12 + veledimex is well tolerated and suggests a survival benefit over historical controls at 6, 9, and 12 months (median OS=9.6 months, n=25)
- Toxicities were tolerable, predictable and reversible upon discontinuing veledimex
- There is a strong correlation between veledimex dose, BBB penetration, and IL-12 production
- These data demonstrate that the RTS® gene switch works in humans toggling not only as a switch to turn on and off the production of IL-12, but also as a rheostat to control the level of IL-12

* As of January 6, 2017

ZIOPHARM Oncology

Interim Median Overall Survival (mOS) Relative to Historical Controls



* As of January 6, 2017

Registration Pathway for Recurrent Glioblastoma

Registration Pathway

- **End-of-Phase 2** face-to-face meeting with FDA in early Q1 2017
- Determine design of **pivotal trial** to be **initiated in 2017**

Glioblastoma

74,000 new cases annually worldwide
12,120 in the U.S. in 2016
Recurrence rates are **~90%**
Less than **10%** of patients are alive at 5 years

Source: World Health Organization, American Cancer Society, Central Brain Tumor Registry of the United States

Clinical Studies with Ad-RTS-hIL-12 + Veledimex in 2017

Based on strong preclinical data previously presented at ASGCT and SNO in 2016, advance to the clinic:

- Combination with checkpoint inhibitor
  - Open stereotactic arm of the Phase 1 GBM study and then combine with checkpoint inhibitor in adult recurrent glioblastoma – 1H 2017
- Pediatric trial for brain tumors
  - Open initially for supratentorial disease and then diffuse intrinsic pontine gliomas (DIPG) – 1H 2017

Strategic focus on brain cancer trials; Pause breast cancer study in 2017

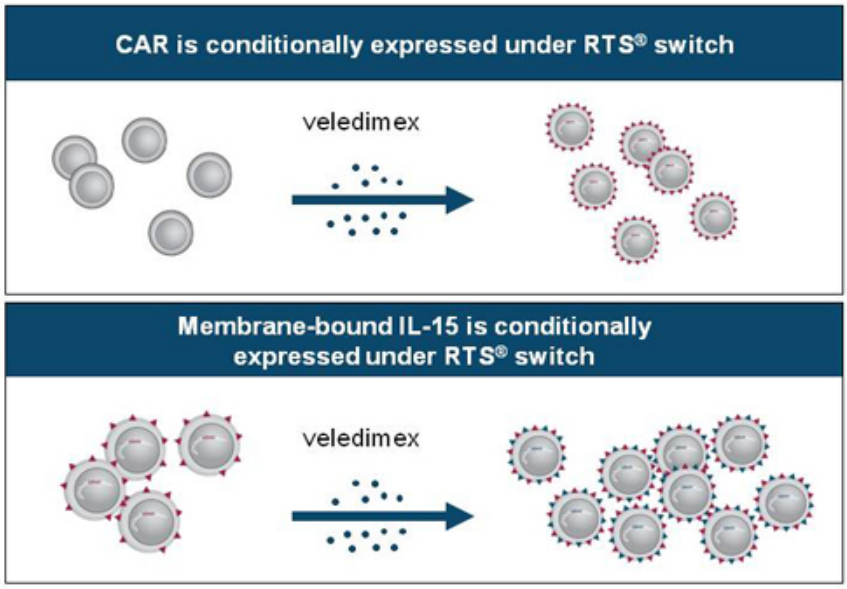
ZIOPHARM Oncology

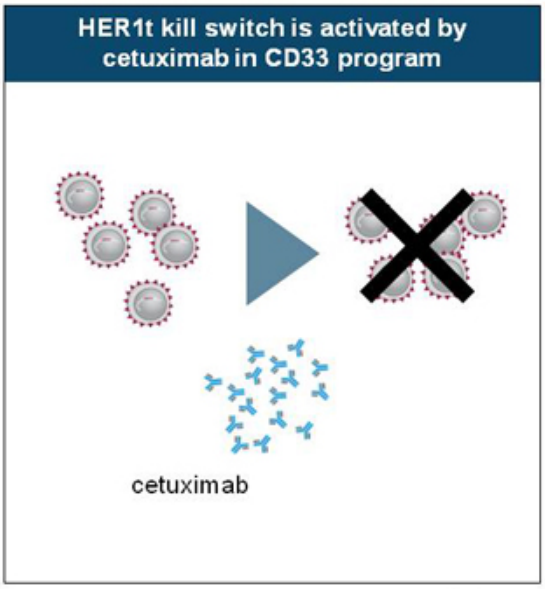
Cost and Control

Competitive Edge in Cell Therapy

ZIOPHARM Oncology

Control of T Cells Through Advanced Genetic Engineering



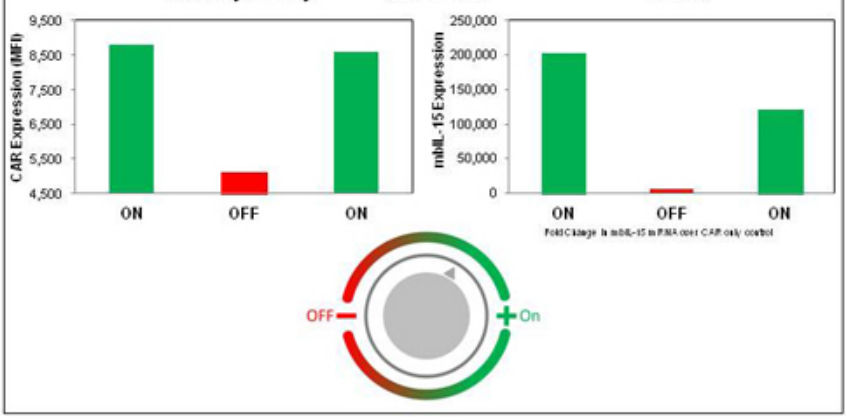


ZIOPHARM Oncology

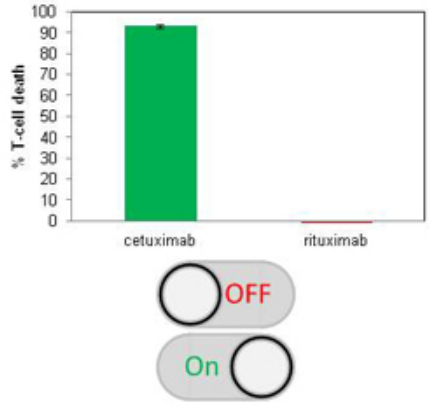
Control of T Cells with RTS® and Kill Switches

CAR and cytokine (mbIL15) are conditionally expressed under RTS® switch

CAR and membrane-bound IL-15 (mbIL15) expression can be turned ON, OFF and back ON by addition or removal of veledimex

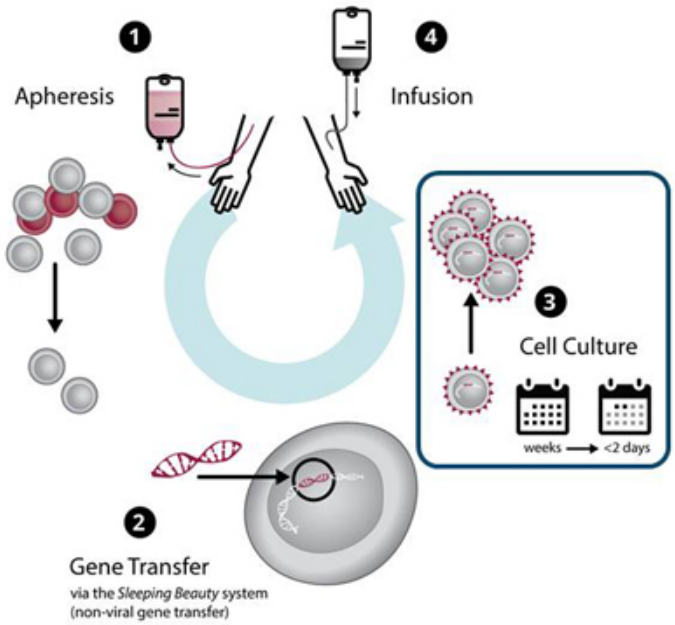


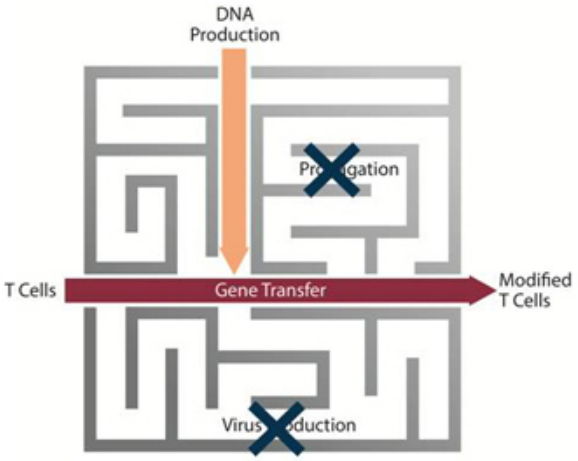
HER1t kill switch is activated by cetuximab in CD33 program



ZIOPHARM Oncology

Minimizing Gene Transfer & Culture Time to Achieve Point-of-Care (POC) for Rapid Production of T cells





ZIOPHARM Oncology

Cost and Control

CD19 CAR+ T: Improving Autologous Cell Therapies

INTREXON®

ZIOPHARM Oncology

CD19 Autologous CAR+ T Program
Harnessing the Potential of the *Sleeping Beauty* Platform

1st generation complete | **2nd generation ongoing** | **3rd generation planned**

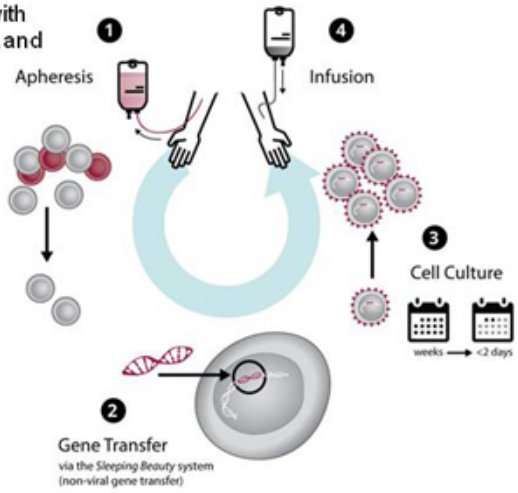
First-in-human trial utilizing *Sleeping Beauty* gene transfer

- Survival rates doubled in comparison with historical controls for patients with NHL and ALL after HSCT*


Phase I trials using *Sleeping Beauty* to generate CD19-specific CAR T cells

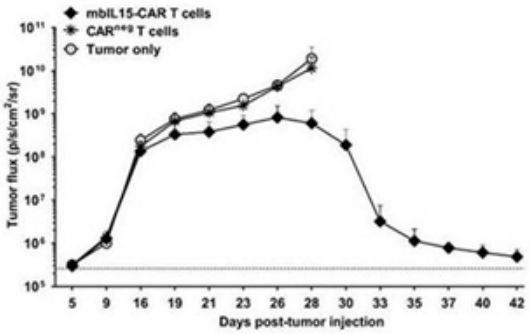
*J Clin Invest. 2016 Sep 1;126(9):3363-76.

Shortening manufacturing process time from 28 days to 14 days



Elimination of *ex vivo* T-cell propagation envisioned under POC using switch-controlled mbIL15

- Mouse studies show improved leukemia-free survival after infusion of T cells**

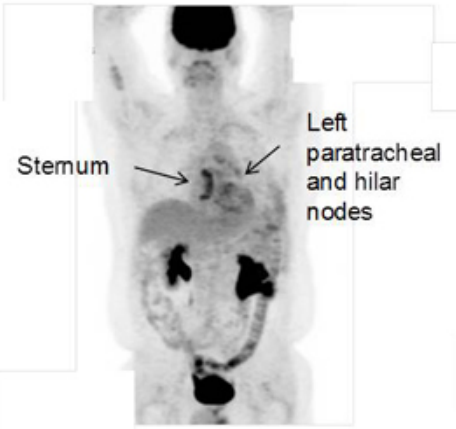


** Proc Natl Acad Sci U S A. 2016 Nov 29;113(48):E7788-E7797
& ASH 2016, Publication Number 2807

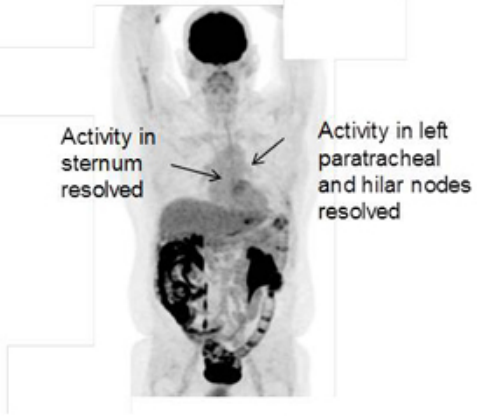
ZIOPHARM Oncology

2nd generation *Sleeping Beauty* Platform
E.g., 3-stim, 23-day manufacturing

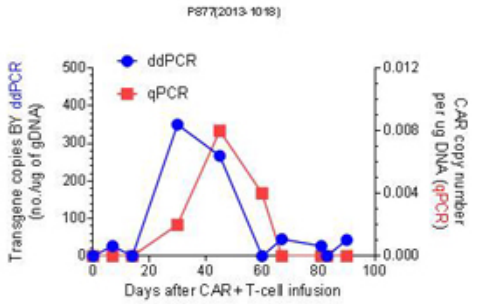
PET-CT Day -8:
Extramedullary ALL

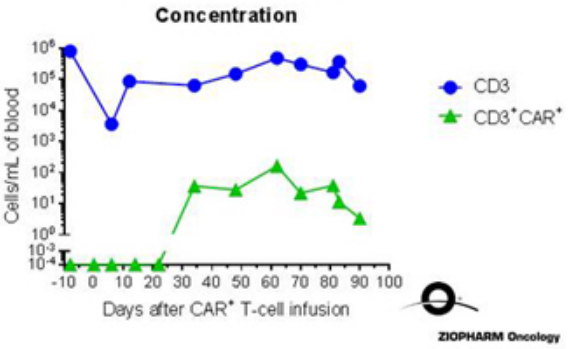


PET-CT Day 48:
Extramedullary ALL resolved



Ongoing CR (currently 90 days) in patient with multiple-relapsed ALL after lymphodepleting chemotherapy





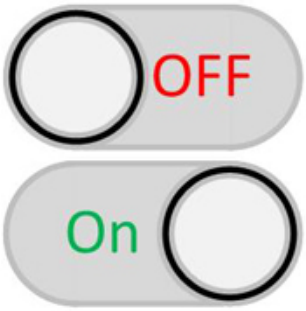
ZIOPHARM Oncology

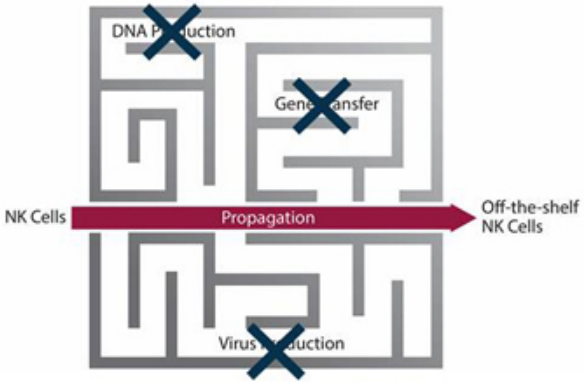
Technologies Extend to Other Immunologic Therapies

INTREXON®

ZIOPHARM Oncology

Targeted Approaches to Treatment of Unmet Need in Acute Myelogenous Leukemia (AML)





Control: CD33 CAR+ T program for AML

- Employs lentivirus and kill switch technology
- Relapsed or Refractory, Adult and Pediatric AML
- Trial to open 1H 2017 following FDA review

Cost: Off-the-shelf (OTS) primary NK cells for AML

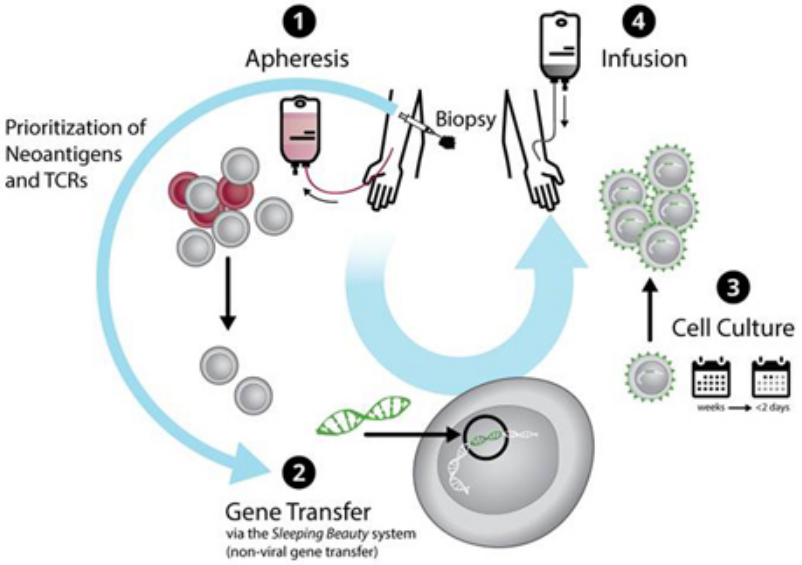
- Ideal OTS therapy because NK cells do not have TCR
- Medically-fragile elderly patients with AML
- Trial to be opened 1H 2017 following FDA review

Clinical trials planned under our R&D Agreement with MDACC

ZIOPHARM Oncology

Targeting Solid Tumors: ZIOPHARM and Intrexon CRADA With NCI

Cooperative Research and Development Agreement with the National Cancer Institute Utilizing *Sleeping Beauty* System to Generate T cells Targeting Neoantigens



original article

Stable, Nonviral Expression of Mutated Tumor Neoantigen-specific T-cell Receptors Using the *Sleeping Beauty* Transposon/Transposase System

Drew C Deniger[1], Anna Pasetto[1], Eric Tran[1], Maria R Parkhurst[1], Cyrille J Cohen[2], Paul F Robbins[1], Laurence JN Cooper[3,4] and Steven A Rosenberg[1]

Mol Ther. 2016 Jun;24(6):1078-89.

ZIOPHARM Oncology

Undertaking the Pipeline Through Partnerships and Collaborations

INTREXON

UCSF

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

DANA-FARBER/BRIGHAM AND WOMEN'S CANCER CENTER

EMD SERONO

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

Memorial Sloan Kettering Cancer Center

Northwestern Memorial Hospital

THE UNIVERSITY OF CHICAGO PRITZKER SCHOOL OF MEDICINE

CEDARS-SINAI

NATIONAL CANCER INSTITUTE

INTREXON

ZIOPHARM Oncology

Corporate and Financial Highlights

- Amended Exclusive Channel Collaborations with Intrexon
  - All unpartnered programs divided 80:20 in favor of ZIOPHARM
    - Provides greater reward for investing in development
    - Increases attractiveness to potential strategic partners
  - Sublicensed programs continue to be divided 50:50*
  - Consideration for new terms is dilutive only under certain developments
- Well Capitalized
  - Approximately $94.7M in cash as of 3Q16
  - Cash runway into 1Q18
  - Shares outstanding as of November 3, 2016: 131.7M
- Highly Efficient Operations with a Headcount of 35
  - Partnerships support preclinical, clinical and commercial development

*Includes exclusive agreement with Intrexon for the development and commercialization of CAR-T products with Merck KGaA, Darmstadt, Germany

Addressing Unmet Medical Needs

Target		Indication	Preclinical	Phase 1	Phase 2	Pivotal
Ad-RTS-hIL-12	Multicenter	GBM				ATI001-102
		Breast Cancer			ATI001-203	
		Pediatric Brain Tumor				
		GBM & Checkpoint (PD-1)				
		Combination with OTS NK cells				
CAR	CD19 2nd Gen. shortened manufacture	Leukemia/Lymphoma		MDACC		
	CD19 3rd Gen. CAR with mbIL15 (POC)	Leukemia/Lymphoma		MDACC		
	CD33	AML		MDACC		
	Merck Target 1	Undisclosed				
	Merck Target 2	Undisclosed				
	POC	Hematologic				
NK Cells	Off the shelf (OTS) primary NK cells	AML		MDACC		
	Genetically-engineered	TBD				
TCR	*Sleeping Beauty* neoantigen	TBD		NCI		
	Sleeping Beauty neoantigen and cytokine	TBD				
Other	Regulatory T Cells	GvHD				
	Modified Bacteria (microbiome)	GvHD				

2017 1H 2017 2H 2017

ZIOPHARM Oncology


ZIOPHARM Oncology
35th Annual J.P. Morgan
Healthcare Conference
January 11, 2017