# 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 7, 2019**

# 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<br>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)).

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act (17 CFR 230.405) or Rule 12b-2 of the Exchange Act (17 CFR 240.12b-2).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

**Item 7.01 Regulation FD Disclosure.**

On January 7, 2019, Ziopharm Oncology, Inc. issued a press release providing a business update.

A copy of the press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K. The information in this Item 7.01 and Exhibit 99.1 attached hereto is intended to be furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such filing.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits

| Exhibit No. | Description |
|---|---|
| 99.1 | Press release dated January 7, 2019. |

**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/ Robert Hadfield
Name: Robert Hadfield
Title: General Counsel and Secretary

Date: January 7, 2019

**Exhibit 99.1**

**Ziopharm Oncology Posts Letter to Stockholders**

**BOSTON, MA, Jan. 7, 2019 (GLOBE NEWSWIRE)** — Ziopharm Oncology, Inc. (Nasdaq:ZIOP) today posted and released the following letter:

Dear Fellow Stockholders,

With the 37th Annual J.P. Morgan Healthcare Conference upon us, we wanted to communicate directly with our shareholders. The theme for 2019 is executional excellence and increasing shareholder value as we advance our cutting-edge science with all programs in the clinic this year. We enter the new year with operational momentum with our *Sleeping Beauty* and Controlled IL-12 platforms.

As of October 2018, we have a simplified relationship with Intrexon, with exclusive rights for the assets we desired most, and we eliminated $157 million of preferred stock held by Intrexon. The new license agreement helped pave the way for us to raise $50 million in a private placement from existing investors, secure a clinical collaboration with Regeneron Pharmaceuticals for Controlled IL-12 and announce a joint venture with committed funding of up to $35 million to bring our *Sleeping Beauty* platform for CD19-specific CAR-T to China.

As we begin 2019, Ziopharm is already better. We are executing as a new company, focusing on our own programs with a concentrated corporate strategy. We have evolved, proven and validated *Sleeping Beauty* as a leading non-viral gene transfer platform and we have treated more than 100 patients with our Controlled IL-12 platform delivering more than 1,250 doses of the activating ligand, veledimex. We are focused on advancing three programs into the clinic in 2019: *Sleeping Beauty* TCR-T, *Sleeping Beauty* CD19 CAR-T, and Controlled IL-12, all of which will be tested in five clinical trials.

***NCI Expected to Begin Treating Patients with Solid Tumors with TCR-T Therapy in Mid-2019***

One of the hottest areas in immunotherapy is centered on the use of T-cell receptors, or TCRs, to target neoantigens for the treatment of solid tumors, the leading cause of cancer deaths in the United States. Therapy for solid tumors represents a potential market almost ten times greater than liquid tumors.

The field is in development stages with significant investment emerging in the TCR-T space as companies increasingly focus on the value of targeting neoantigens. We could not be better positioned with our unique and technically-advanced program. We are different from others in this space as we aim to be the first non-viral approach to generating multiple TCRs directed at multiple neoantigen targets to serve as therapy for individual patients. It is our belief that a viral-based approach to manufacturing patient-specific

TCRs will not be commercially feasible. In contrast, we have the most advanced non-viral genetic engineering solution to generate T cells at scale tailored to be specific for solid tumors.

Dr. Steven Rosenberg and his team at the NCI have been exploring how to treat solid tumors with patient-derived T cells for many years, which leads them and us to believe that the best method to attack these cancers is to engineer TCRs on a patient's own T cells. This was the driving force that brought us together in 2017 when we announced our Collaborative Research and Development Agreement (CRADA). We now sit at the cusp of entering the clinic with them this year. It is important to note that many elements of the NCI's approach to developing this class of therapy, namely neoantigen and TCR identification, are identical for their research collaborators with one key exception: our collaboration avoids the use of virus to express the multiple TCRs needed on a patient-by-patient basis.

We believe that unless you can deliver a commercially-viable product efficiently and at a reasonable cost, a T-cell program will struggle to scale to meet needs and thus get off the ground. We see this with commercialization efforts for single-target CD19-specific CAR-T therapies and these issues will be magnified significantly for multiple-target TCR-T cell therapies. Our *Sleeping Beauty* platform provides a low-cost and less complex manufacturing solution for T cells expressing a battery of TCRs that is paramount to commercializing a TCR-T therapy.

Simply put, we believe infusing T cells designed to target neoantigens offers the best hope for any patient with metastatic solid tumors. To be successful in this arena, we have to provide a solution to two major challenges. The first is the ability to express different TCRs for different patients as the neoantigen targets are most often unique to each cancer patient. The second is to prevent relapse by targeting multiple neoantigens for each patient as, unlike CD19, there is no one target that is expressed by all cancer cells within a solid tumor. Our *Sleeping Beauty* platform can address both challenges as it can be scaled to deliver unique TCRs, so multiple patients with a variety of solid tumors can benefit, and it can be scaled to deliver multiple TCRs in a patient's T cells, so the recipient has the best chance of an anti-tumor effect.

### **Sleeping Beauty** ***to Overcome Commercialization Hurdles of CAR-T Therapy***

The headwinds of cost and complexity continue to limit commercial success of approved CAR-T therapies, despite the billions of dollars invested to date to develop and commercialize these technologies. Our *Sleeping Beauty* system, designed to express CD19-specific CAR with membrane-bound interleukin 15 (mbIL15), was adapted for the very rapid manufacture of patient-derived T cells in two days or less, which should result in a dramatic cost savings and increase the number of patients who benefit. When resetting our relationship with Intrexon/Precigen, Ziopharm made the strategic decision to no longer engage in the business of developing new CAR targets and instead to focus on a more simplified and cost-efficient CAR-T business model, to pursue CAR-T therapies already approved or CAR targets that we believe are highly validated.

Using our *Sleeping Beauty* platform, we believe we can solve ongoing commercialization hurdles by manufacturing CAR-T faster and at a fraction of the expense compared to viral vectors, thereby dramatically expanding patient access. We have made

considerable progress in achieving T-cell viability needed to obtain regulatory clearance for our clinical trial. We plan to begin using this approach to treat patients at MD Anderson in the second half of 2019 with CD19-specific CAR-T therapies (with mbIL15 and a kill switch) manufactured in two days or less following gene transfer. Also, our new joint venture, Eden BioCell, will appropriate the same *Sleeping Beauty* platform to undertake very rapid manufacturing in the Greater China markets to help solve production issues of CD19 CAR-T cell therapy. We own 50 percent of Eden BioCell with our partner, TriArm Therapeutics, which committed up to $35 million to this joint venture. TriArm was formed by Panacea Venture Healthcare, a fund co-founded and managed by James Huang, Managing Partner of Kleiner Perkins Caufield & Byers China (KPCB China). As our CAR-T efforts are now well funded both at MD Anderson and Eden BioCell, there is considerable upside for our investors in this program with minimal impact to our bottom-line.

***Controlled IL-12 under RheoSwitch with Low-dose Steroids Provides Survival Benefit for Patients with Brain Cancer***

IL-12 is likely the most potent immune stimulator in the cytokine family that leads to profound anti-tumor effects. In our clinical studies, we have demonstrated that IL-12 recruits and sustains a significant and long-term T-cell response and an upregulation of checkpoints, such as PD-1.

We believe our technology provides the precision to safely harness IL-12 which will enable us to turn it into a potent drug. IL-12 experts have stated that the first company to turn this exquisitely powerful cytokine into a controllable drug will have untapped a new and sizeable market, and we are on the verge of doing just that. In addition, we have witnessed the importance and value of genetic switches when reviewing comparable technologies in the marketplace. Our RheoSwitch appears to be the most validated transcriptional switch in development for oncology and our data show that IL-12 can be efficiently turned up and down, on and off.

Our experience administering Controlled IL-12 (Ad-RTS-hIL-12 plus veledimex) as a monotherapy for recurrent glioblastoma (rGBM) has produced compelling clinical data, with a subset of patients in a phase 1 trial, who received low-dose steroids along with 20 mg of veledimex, achieving a remarkable 17.8 months median overall survival (OS) when compared with 5 to 8 months OS established in historical controls. We are building on these data with an expansion cohort of an additional 25 patients taking 20 mg of veledimex, which is on track to be fully enrolled this week with 65 percent of enrolled patients having received low-dose steroids. We have growing interest from potential new trial sites and accrual is occurring faster than ever before for our IL-12 trials.

After the administration of IL-12 as a single agent, we demonstrated through biopsies that the invading T cells within rGBM had upregulated PD-1. This provided a convincing justification for combining Controlled IL-12 with PD-1 inhibitors, which is why we expect to show the value of Controlled IL-12 in combination with checkpoint inhibitors in two trials in 2019. Enrollment in our existing combination trial with the PD-1 inhibitor OPDIVO® (nivolumab) is expected to be complete in 2Q2019. Our new partnership with Regeneron, which validates our commitment to this promising platform, is advancing into a phase 2 trial to evaluate Controlled IL-12 in combination with Regeneron's PD-1 antibody, Libtayo® (cemiplimab-rwlc), later this year.

***Building upon momentum***

After completing a significant transformation in 2018, we have the right assets, resources, supporters, and partners to deliver life-saving cell and gene immunotherapies to patients with cancer. We cleaned up our balance sheet, we are fully funded into 2Q2020 without debt, and we are advancing *Sleeping Beauty* CD19-specific CAR T and Controlled IL-12. These two programs in and of themselves hold tremendous value, and furthermore, we believe our TCR program stands alone in a new class of T-cell therapeutics which offers the best chance of having a profound impact on the lives of patients with solid tumors.

We appreciate your support and confidence and on behalf of everyone at Ziopharm, we wish you all a happy, healthy and prosperous 2019.

Sincerely,

Laurence Cooper, M.D., Ph.D.
Ziopharm Chief Executive Officer

**About Ziopharm Oncology, Inc.**

Ziopharm Oncology is an immuno-oncology company focused on developing end-to-end cost-effective solutions using its non-viral *Sleeping Beauty* platform for TCR and CAR T-cell therapies and immune-stimulating gene therapy with Controlled interleukin 12 (IL-12). The *Sleeping Beauty* platform genetically modifies T cells with DNA plasmids to express T-cell receptors (TCRs) to target specific antigens in solid tumors and chimeric antigen receptors (CARs) to target CD19 in blood cancers with the Company's very rapid T-cell manufacturing process. The *Sleeping Beauty* platform is being advanced in collaboration with the National Cancer Institute, The University of Texas MD Anderson Cancer Center and Eden BioCell. The Company also is developing its Controlled IL-12 platform or Ad-RTS-hIL-12 plus veledimex as monotherapy and in combination with immune checkpoint inhibitors to treat brain cancer, including in collaboration with Regeneron Pharmaceuticals.

**Forward-Looking Statements Disclaimer**

This press release contains forward-looking statements as defined in 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 Company's business and strategic plans, the availability of cash resources, and the progress and timing of the development of Ziopharm's research and development programs, including the timing for the initiation and completion of its clinical trials. Although Ziopharm's management team believes that the expectations reflected in such forward-looking statements are reasonable, investors are cautioned that forward-looking information and statements are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of Ziopharm, that could cause actual results and developments to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include among other things, changes in our operating plans that may impact our cash expenditures, the uncertainties inherent in research and development, future clinical

data and analysis, including whether any of Ziopharm's product candidates will advance further in the preclinical research or clinical trial process, including receiving clearance from the U.S. Food and Drug Administration or equivalent foreign regulatory agencies to conduct clinical trials and whether and when, if at all, they will receive final approval from the U.S. FDA or equivalent foreign regulatory agencies and for which indication; the strength and enforceability of Ziopharm's intellectual property rights; competition from other pharmaceutical and biotechnology companies as well as risk factors discussed or identified in the public filings with the Securities and Exchange Commission made by Ziopharm, including those risks and uncertainties listed in Ziopharm's quarterly report on Form 10-Q for the quarter ended September 30, 2018 filed by Ziopharm with the Securities and Exchange Commission. We are providing this information as of Jan. 2, 2019, and Ziopharm does not undertake any obligation to update or revise the information contained in this press release whether as a result of new information, future events or any other reason.

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