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 6, 2023

SENTI BIOSCIENCES, INC. (Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation)

001-40440 (Commission File Number)

86-2437900 (IRS Employer Identification No.)

2 Corporate Drive, First Floor South San Francisco, California 94080 (Address of principal executive offices including zip code)								
	Registrant's telephone number, including area code: (650) 382-3281 (Former name or former address, if changed since last report)							
Check the appropriate box below if the Form 8-K filing 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))							
Secur	urities registered pursuant to Section 12(b) of the Act:							
	Title of each class	Trading Symbol	Name of each exchange on which registered					
	Common Stock, par value \$0.0001 per share	SNTI	The Nasdaq Global Market					
Indica	cate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the oter).	e Securities Act of 1933 (§230.405 of this	hapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this					
Emer	erging 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 8.01 Other Events.

Beginning on January 9, 2023, Senti Biosciences, Inc. (the "Company") will participate in the 41st Annual J.P. Morgan Healthcare Conference with investors. A copy of the Company's presentation materials has been posted to the Company's website and is filed herewith as Exhibit 99.1 to this Current Report on Form 8-K and incorporated by reference herein.

Cautionary Statemen

This filing and the exhibits include "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We intend these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act and Section 21E of the Exchange Act, and are making this statement for purposes of complying with those safe harbor provisions. These forward-looking statements reflect our current views about our plans, intentions, expectations, strategies, and prospects, which are based on the information currently available to us and on assumptions we have made. Important factors that may cause actual results to differ materially from those described in the forward-looking statements are disclosed in the respective exhibits and in the "Risk Factors" contained in the Company's Form 10-Q filed with the Securities and Exchange Commission") on November 10, 2022, and other filings we make with the Commission. All forward-looking statements are expressly qualified in their entirety by such factors. We do not undertake any duty to update any forward-looking statement except as required by law.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description		
99.1	Corporate presentation.		
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)		

SIGNATURE

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.

SENTI BIOSCIENCES, INC.

Date: January 6, 2023

/s/ Timothy Lu
Timothy Lu, M.D., Ph.D.
Chief Executive Officer & President Title:



Disclaimer



Forward Looking Statements

This presentation contains forward-looking statements. Statements we make in this presentation may include statements which are not historical facts and are considered forward-looking within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are usually identified by the use of words such as "anticipates," "ebelieves," "estimates," "expects," "future," "opportunity," "proposed," "targets," "intends," "may," "plans," "projects," "seeks," "should," "will," and variations of such words or similar expressions. We intend these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act and Section 21E of the Securities Act and are making this statement for purposes of complying with those safe harbor provisions. These forward-looking statements relating to the attributes and benefits of our technology platform and our product candidates, including their therapeutic potential, our plans to submit INDs for our product candidates and the timing of such submissions, the generation and presentation of data regarding preclinical programs and the related timing, our proposed Phase 1 studies, including study design and endpoints, our ability to enter into new collaborations, our manufacturing process and its potential benefits, and our cash runway, reflect our current views about our plans, intentions, expectations, strategies and prospects, which are based on the information currently available to us and on assumptions we have made. These forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied on as a guarantee, an assurance, a prediction or a definitive statement of affected in or subgested by those forward-looking statements are reasonable, we can give no assurance that the plans, intentions, expectations, strategies will be attained or achieved. Many actual events and ci

Trademark

This document contains references to trademarks, trade names and service marks belonging to other entities. Solely for convenience, trademarks, trade names and service marks referred to in this presentation may appear without the * or TM symbols, but such references are not intended to indicate, in any way, that the applicable owner will not assert, to the fullest extent under applicable law, its rights to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entities.

Pioneering Smarter Next Generation Cell and Gene Therapies





Gene Circuits

Multi-Arming Logic Gating (OR and NOT GATEs) Regulator Dial Smart Sensor

to

reprogram cells to sense, compute, and respond to disease

Two INDs Anticipated in 2023

Pipeline of CAR-NK Cell Therapies

Diseases: blood cancers and solid tumors

Gene Circuit advantages: multi-arming, selectivity and control

Manufacturing: off-the-shelf, scalable with outpatient potential



Precise gene therapy for eye, CNS and liver applications

Targeted and controllable iPSC cell therapies for regenerative medicine

Founded 2016 | Public June 2022 | Anticipated Cash Runway into 2024 | Headquartered South San Francisco, CA

CNS: Central Nervous System

Industry-Leading Management With Top-Tier Board and Scientific Advisors

Executive Team

Tim Lu, MD, PhD CEO & Co-Founder



Philip Lee, PhD CTO & Co-Founder



Deb Knobelman, PhD CFO



Kanya Rajangam, MD, PhD Chief Medical and Development Officer (CMDO)



nkarta

Scientific Advisors

 James Collins, PhD
 Scientific Co-Founder, MIT

 Michael Andreeff, MD, PhD
 MD Anderson Cancer Center

 Lawrence Fong, PhD
 UCSF

 Martin Fussenegger, PhD
 ETH Zurich

 Michael Kalos, PhD
 Arsenal, Janssen, Lilly

 Ahmad (Mo) Khalil, PhD
 Boston University

 Robin Taylor, PhD, MBA
 SeaGen, Genentech

 Michael Varney, PhD
 Erasca, Genentech

Wilson Wong, PhD Scientific Co-Founder, Boston University

Board of Directors

Susan Berland Senior Financial Executive

Brenda Cooperstone, MD Pfizer Rare Disease

Ed Mathers NEA

Omid Farokhzad, MD

James Collins, PhD Scientific Co-Founder, MIT

David R. Epstein Seagen Inc.
Tim Lu MD, PhD CEO & Co-Founder



Gene Circuits Designed to Solve for Key Cell Therapy Challenges



Cancer Cell Therapy Challenges **Senti's Gene Circuit Solutions** Autocrine and paracrine activation with proprietary Calibrated Lack of NK cell expansion Multi-Arming Release IL-15 (crIL-15) and other complementary cytokines and persistence (e.g., IL-21) Antigen escape and Logic Gating Bivalent activating CAR with **OR Logic Gate** tumor heterogeneity Dirty targets Logic Gating Inhibitory CAR protects healthy cells with NOT Logic Gate (on-target, off-tumor toxicity) Pulsed Calibrated Release IL-12 with small molecule-Immunosuppressive tumor Regulator Dial controlled Regulator Dial microenvironment

NK Cells Compare Favorably to T Cell Based Therapies



Capabilities	Current Auto T Cells	Senti's CAR-NK Cells
Off-the-shelf potential with broad patient accessibility	×	\checkmark
Designed with Logic Gates to achieve enhanced selectivity and safety	×	✓
Engineered with enhanced persistence	N/A	✓
Engineered to stimulate the patient immune system	×	✓

Extensive clinical experience with allogeneic donor-derived unengineered NK cells¹

- ~70 global peripheral blood derived unengineered NK cell therapy clinical trials¹
- Well-tolerated (~500 patients clinical experience)²
 - o No (or minimal) CRS, neurotoxicity, GvHD
- Anti-tumor activity observed in AML²
 - o 19% CR in 105 R/R AML patients aggregated from multiple trials

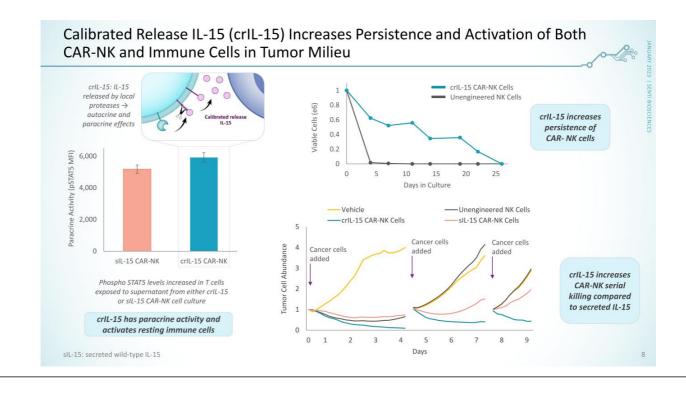
Key limitations of unengineered NK cells

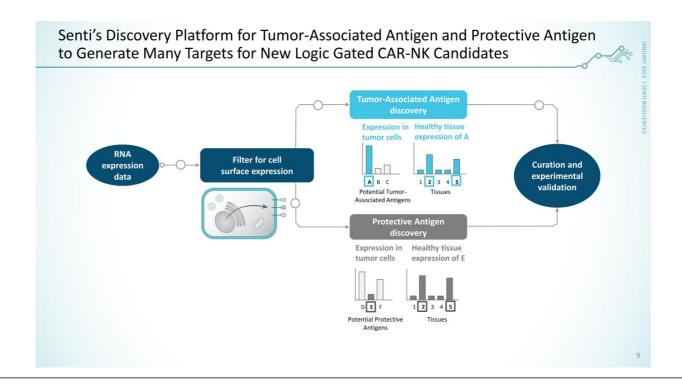
Limited activity beyond AML, persistence, durability, donor variability and select single clinical center usage

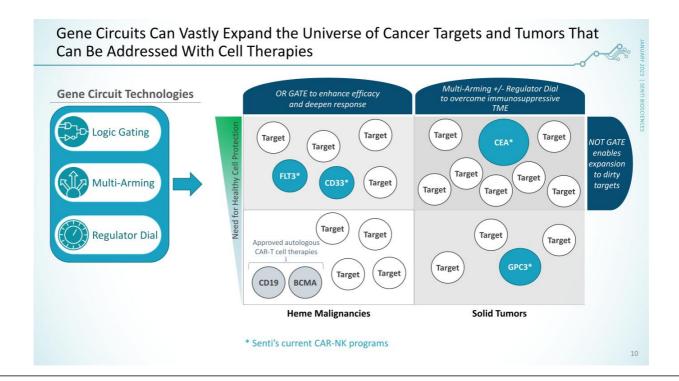
Senti's Gene Circuit technology, donor selection and scalable manufacturing address these limitations

¹ Lamers-Kok Journal of Hematology & Oncology 2022; ² Bachier 2021

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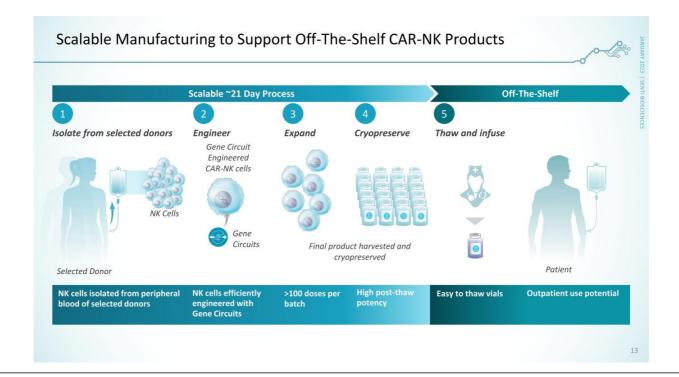


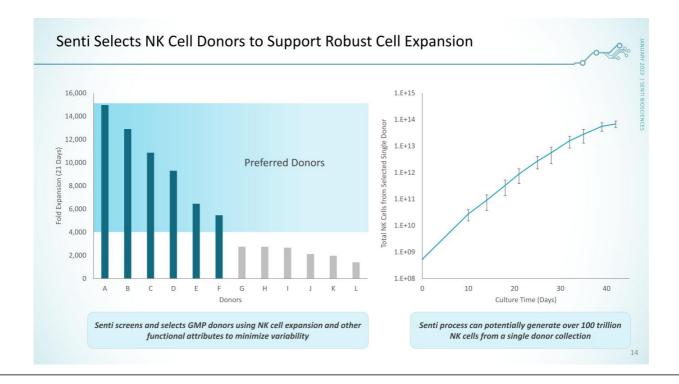


Senti's Next Generation CAR-NK Cell Therapy Pipeline Tackles Hard to Treat Cancers

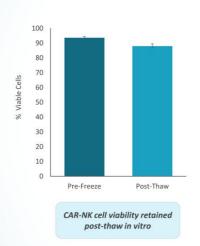


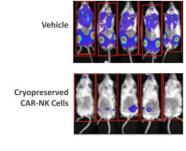






Senti's Cryopreservation Process Retains High Potency of CAR-NK Products Supporting Multi-Country and Multi-Site Clinical Evaluation



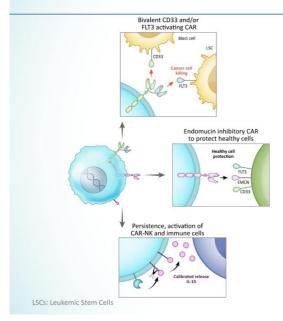


In vivo activity with cryopreserved CAR NK cells in MOLM13 AML NSG mouse model (10 days after single dose)



SENTI-202 for CD33 and/or FLT3 Expressing Blood Cancers

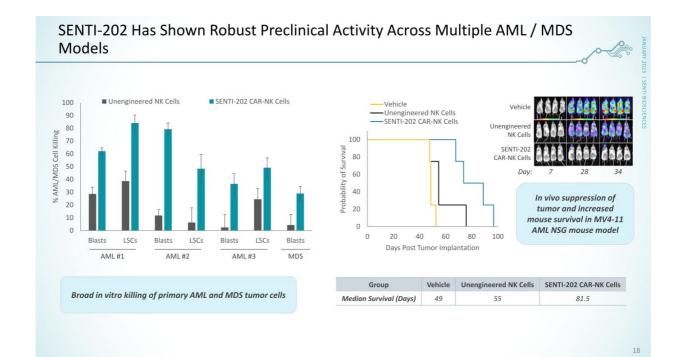


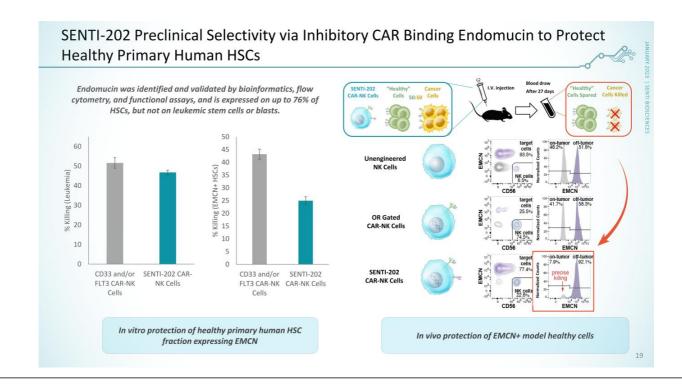


Multi-Armed, off-the-shelf, selective CAR-NK

- OR GATE: bivalent CD33 and/or FLT3 activation
 → potential for deep and durable responses in acute myeloid leukemia (AML) and other blood cancers.
- NOT GATE: inhibition by endomucin (EMCN)
 protective antigen selectively expressed on
 healthy hematopoietic stem cells (HSCs) →
 potential for improved safety and increased
 therapeutic window
- crIL-15 → potential for increased persistence, autocrine and paracrine immune cell activation

On track for IND in 2H 2023





Proposed Phase 1 Study in R/R CD33+ and/or FLT3+ Malignancies With Focus on AML

High unmet need in patients with AML

- 20,050 newly diagnosed AML patients in the US¹
- 30.5% 5-year survival¹

Proposed Phase 1 study anticipated to enroll R/R CD33+ and/or FLT3+ heme malignancies

- · Modified "3+3" study design
- Received at least 1 prior treatment including targeted agents if FLT3, IDH1/2 mutation+
- · 2 of 3 patients at each dose level with AML
- Disease specific expansion cohorts for AML and MDS

Planned study endpoints

- Safety, DLT, identify recommended Phase 2 dose
- Efficacy using standard ELN 2022 criteria for AML and other disease specific consensus criteria
- PK, pharmacodynamics including endomucin protection, immunogenicity

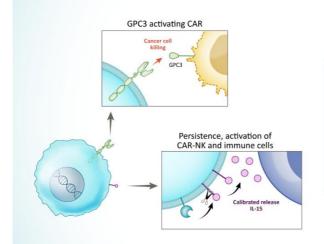
Seer estimates

Lymphodepletion Fludarabine Cyclophosphamide Planned Study Treatment/ Cycle SENTI-202 2-3 dose levels of cells Additional cycles+

Planned data-driven seamless Phase 1 to pivotal design

SENTI-301A for GPC3 Expressing Solid Tumors





Multi-Armed, off-the-shelf, selective CAR-NK

- *GPC3 activating CAR* → hepatocellular carcinoma (HCC) and other solid tumors
- crlL-15 → potential for increased persistence, autocrine and paracrine immune cell activation

On track for IND in 2023

SENTI-301A Aims to Address Unmet Needs in GPC3 Expressing Solid Tumors With a Focus on HCC

GPC3 is an attractive cancer target

- Glypican-3 (GPC3) is a membrane-bound protein normally expressed in fetal tissues such as liver and placenta.
- After birth, GPC3 is not expressed in healthy liver tissue or other human organs but is overexpressed in different tumor types, notably in HCC (70-90% GPC3+)¹ and other solid tumors (29-54%² GPC3+)
- Academic GPC3 CAR-T cell trials have shown promising activity but limited by CAR-T toxicities precluding multiple dosing and limited durability³

SENTI-301A is designed to target GPC3 expressing tumors

- Aim to address unmet need in HCC as the initial focus given the lack of targeted therapies and lack of effective immunotherapies
- Tackle multiple solid tumors with high GPC3 antigen expression via NKs multi-armed with GPC3 CAR and crlL-15

Large Cell Lung
Carcinoma
Hepatocellular
Carcinoma

Ovarian Clear
Cell Carcinoma

Common GPC3
expressing tumors

¹ Zheng 2022, ² Moek 2018, ³ Shi 2020

SENTI-301A Preclinical Anti-Cancer Activity and Proposed Phase 1 Study in Advanced Solid Tumors With Focus on HCC

High unmet need in patients with liver cancer

- 41,260 newly diagnosed HCC patients in the US1
- 20.8% 5-year survival rate1

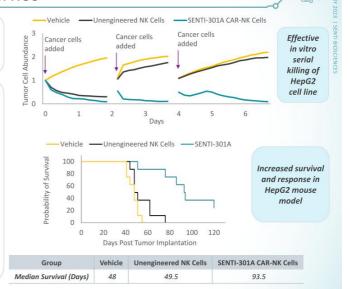
Proposed Phase 1 study anticipated to enroll an advanced metastatic GPC3 solid tumor population

- · Must have received standard of care
- Advanced solid tumors with focus on HCC during dose finding
- Disease specific expansion cohorts of advanced HCC and other solid tumors including lung cancer

Planned study treatment

- · Multi-dose and multi-cycle following conditioning
- · 2-3 cell dose levels

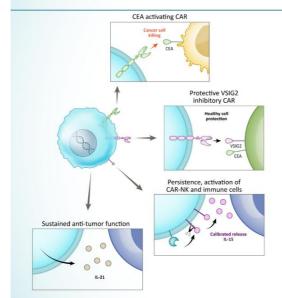
¹ Seer estimates (liver and intrahepatic bile duct cancer combined)



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SENTI-401 for CEA Expressing Solid Tumors





Multi-Armed, off-the-shelf, selective CAR-NK

- CEACAM5 (CEA) activating CAR → metastic colorectal cancer (mCRC) and other solid tumors
- NOT GATE: inhibition by VSIG2 antigen on healthy epithelial cells → potential for improved safety, increased therapeutic window and reduced ontarget, off-tumor toxicity
- crIL-15 → potential for increased persistence and autocrine and paracrine immune cell activation
- IL-21 → construct to further potentiate persistence and efficacy of CAR-NK cells and to stimulate endogenous immune cells

SENTI-401 Aims to Address Unmet Needs in CEA Expressing Solid Tumors With a Focus on mCRC

High unmet need in patients with colorectal cancer

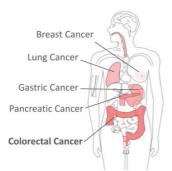
- 151,030 newly diagnosed CRC patients in the US1
- 65.1% 5-year survival rate¹

CEA is an attractive cancer target

- CEA is overexpressed in several solid tumors, including CRC (~85-90% CEA+) as well as NSCLC, gastric and esophageal cancers
- CEA-targeted adoptive T cell trials reported objective regression but also observed colitis potentially from on-target, off-tumor toxicity²

SENTI-401 is designed to target CEA expressing tumors while minimizing on-target, off-tumor toxicity using a NOT GATE

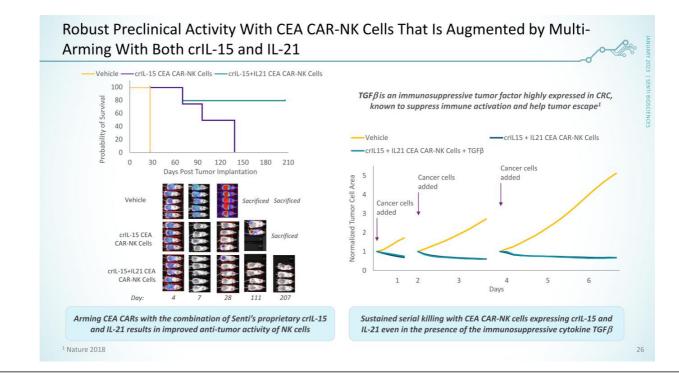
Tumor Types With CEA Overexpression³

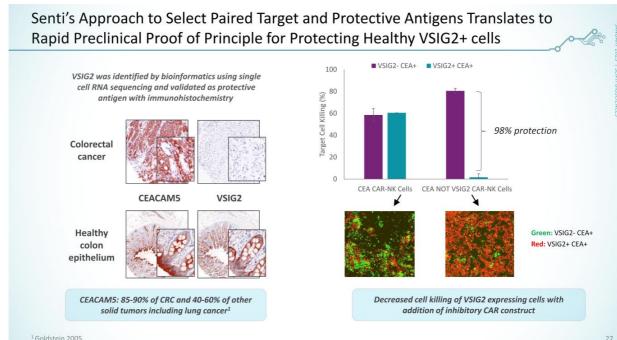


Healthy Tissues With CEA Overexpression³

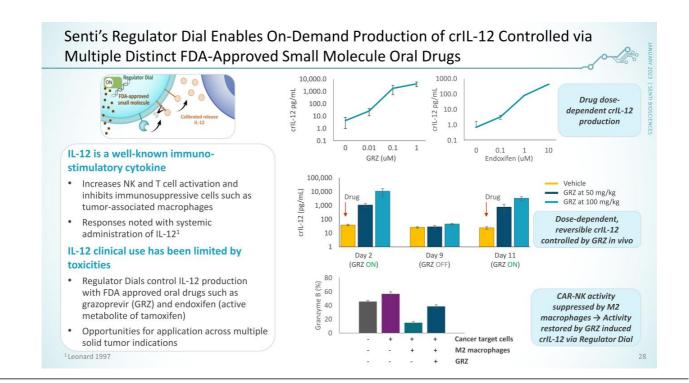


1 Seer estimates, 2 Parkhurst, et al. 3 Median expression of tumor and normal samples in body map (Log2 (TPM+1) scale). Source: TCGA, Gtex and Nat Genetics 2020 [GSE132465]

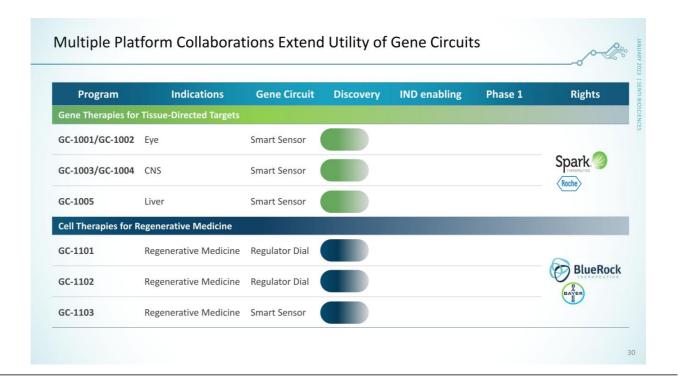


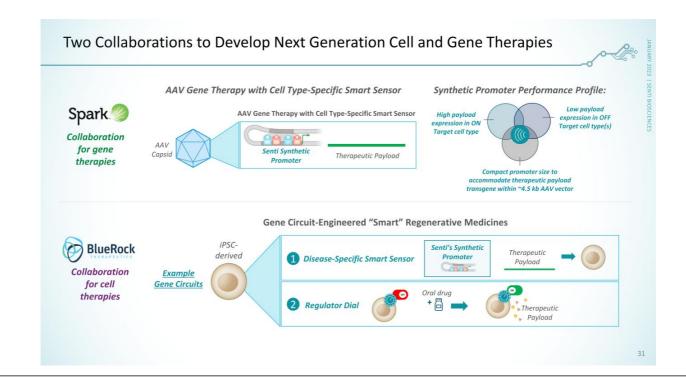


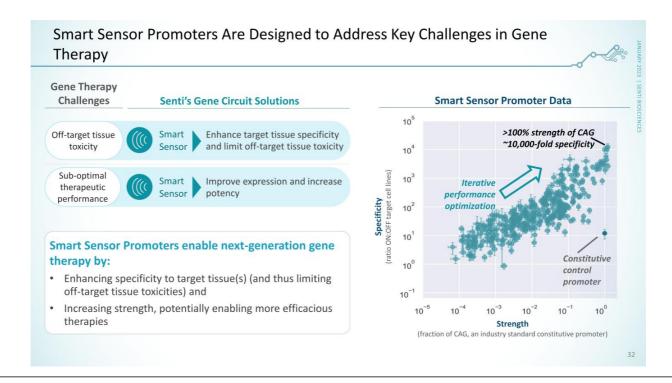
¹Goldstein 2005

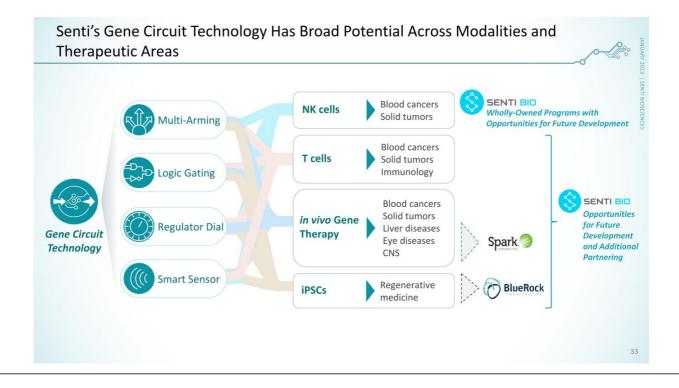












2022 Milestones and Upcoming Value Driving Milestones

Program	2022 Completed Milestones	2023 Anticipated Milestones	
SENTI-202 CD33 and/or FLT3 AML, MDS and other blood cancers	Presented key preclinical data at ASH in December 2022	File IND application in 2H 2023	
SENTI-301A GPC3 HCC and other solid tumors	Presented preclinical data at SITC in November 2022	File IND application in 2023	
SENTI-401 CEA CRC and other solid tumors	Presented preclinical data at SITC in November 2022	Present data at key scientific conferences	
Additional Programs Other tumors	Initiated research work on additional CAR-NK pipeline programs	Pre-clinical PoCs for additional pipeline candidates	
Manufacturing	Initiated manufacturing activities and presented data at key conferences		

