7 July 2021

Aptevo Therapeutics

A Leading Bispecific Antibody Company

NASDAQ: APVO

Forward-Looking Statements

This presentation includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any statements, other than statements of historical fact, including statements regarding our financial guidance, product portfolio, product sales, capabilities, potential partnerships and collaborations, the ability of therapeutic candidates to function as designed in preclinical and clinical development, the continued advancement of product candidates in preclinical development and clinical trials, our goals and milestones, our expectations regarding the size of the patient populations for our therapeutic product candidates if approved for commercial use, our expectations regarding the safety and effectiveness of our ADAPTIR and ADAPTIR-FLEX platform technologies and our therapeutic product candidates, our ability to obtain regulatory approval for our therapeutic product candidates, our choice of funding sources and our ability to obtain non-dilutive funding, our expectations of future warrant exercises and the resulting impact to our cash position as a result thereof, the monetization of RUXIENCE and IXINITY payment streams, and any other statements containing the words “believes”, “expects”, “anticipates”, “intends”, “plans”, “forecasts”, “estimates” and similar expressions in conjunction with, among other things, discussions of financial performance or financial condition, growth strategy, product sales, manufacturing capabilities, product development, regulatory approvals or expenditures are forward-looking statements. These forward-looking statements are based on our current intentions, beliefs and expectations regarding future events. We cannot guarantee that any forward-looking statement will be accurate. Investors should realize that if underlying assumptions prove inaccurate or unknown risks or uncertainties materialize, actual results could differ materially from our expectations. Investors are, therefore, cautioned not to place undue reliance on any forward-looking statement. Any forward-looking statement speaks only as of the date of this presentation, and, except as required by law, we do not undertake to update any forward-looking statement to reflect new information, events or circumstances.

There are a number of important factors that could cause Aptevo's actual results to differ materially from those indicated by such forward- looking statements, including possible negative effects on Aptevo’s business operations, assets or financial results as a result of the separation; a deterioration in the business or prospects of Aptevo; adverse developments in Aptevo’s customer-base or markets; our ability to enter into and maintain selective collaboration and partnership arrangements; the timing of and our ability to achieve milestones in collaboration and partnership contracts; our ability and the ability of our contractors and suppliers to maintain compliance with cGMP and other regulatory obligations; the results of regulatory inspections; the rate and degree of market acceptance and clinical utility of our products; the success of our ongoing and planned development programs; the timing of and our ability to obtain and maintain regulatory approvals for our therapeutic product candidates; and our commercialization, marketing and manufacturing capabilities and strategy and changes in regulatory, social and political conditions. Additional risks and factors that may affect results are set forth in our filings with the Securities and Exchange Commission (the SEC), including Aptevo’s most recent Annual Report on Form 10-K, as filed on March 25, 2020, and its subsequent reports on Form 10-Q and current reports on Form 8-K.

The foregoing sets forth many, but not all, of the factors that could cause actual results to differ from our expectations in any forward-looking statement. Investors should consider this cautionary statement, as well as the risk factors identified in our periodic reports filed with the SEC, when evaluating our forward-looking statements.

Aptevo at-a-Glance

- Clinical-stage immunotherapy company focused on developing novel immuno-oncology therapeutics
- Differentiated bispecific and multi-specific antibody platform technologies ADAPTIR™ and ADAPTIR-FLEX™
  - Enables generation of novel candidates designed for multiple MOAs
  - Utilizes best structure to fit desired biology, specificity and affinity
- Clinical portfolio: Lead candidate, APVO436 currently in Phase 1b multi-part clinical trial, for the treatment of acute myeloid leukemia (AML) and myelodysplastic syndromes (MDS)[1]
  - Positive results for the dose escalation portion reported on May 26, 2021 (AML/MDS)
  - Activation[2] of expansion part reported on May 27, 2021 (AML)
- Broad preclinical portfolio: Multiple novel candidates in development
  - ALG.APV-527: Designed for treatment of solid tumors expressing tumor antigen 5T4
  - APVO603: Designed for treatment of solid tumors
  - APVO442: Affinity-optimized anti-CD3 for improved biodistribution to prostate tumors

(1) Data as of May 26, 2021
(2) Active IND, initiation of enrollment pending

Experienced Leadership

Senior Management

Marvin White – President & CEO
Emergent Director; Former CFO, St. Vincent's Health; Former Executive Director & CFO, Lilly USA

Jeff Lamothe – SVP, CFO
Former Emergent VP, Finance; Former CFO, Cangene Corporation

Jane Gross, Ph.D. – SVP, CSO
Former Emergent VP, Research/Non-Clinical Development; Former VP Immunology Research ZymoGenetics Inc.

Scott Stromatt, M.D. – CMO*
Former Emergent SVP, CMO; Former CMO, Trubion

SoYoung Kwon – SVP, GC, Corporate Affairs & HR
Former SVP, GC and Corporate Secretary, AGC Biologics

Censia Pottorf – VP, Human Resources
Former Head of HR at Sweetlabs,Inc., HR at GreatCall,Inc.

Board of Directors

Marvin White
Emergent Director; Former CFO, St. Vincent's Health; Former Executive Director & CFO, Lilly USA

Fuad El-Hibri
Founder, Executive Chairman, Emergent BioSolutions

Daniel Abdun-Nabi
Former President & CEO, COO, Emergent BioSolutions, Former General Counsel, IGEN International, Inc.

Grady Grant, III
Former Vice President of Sales, Tissue Tech Limited; Former Reckitt Benckiser Group; Former Eli Lilly & Co.

Zsolt Harsanyi, Ph.D.
N-Gene Research Labs; Exponential Biotherapies; Porton Int'l

Barbara Lopez Kunz
DIA; Battelle; Thermo Fisher Scientific; ICI/Uniqema

John Niederhuber, M.D.
Inova Translational Medicine Institute; National Cancer Institute; Johns Hopkins University

Extensive R&D, Manufacturing, Commercial and Financial Expertise and Experience

*Dr. Stromatt is a consultant to the company.

Robust Pipeline: Potential for Multiple Shots on Goal in Hematologic Malignancies and Solid Tumors

Product/ Candidate Target	Technology	Potential Indications	Pre-Clinical	Clinical Development Stage			Marketed	Milestones/Highlights
				Phase I	Phase II	Phase III		
APVO436 CD3/CD123	Redirected T cell Cytotoxicity (RTCC)	AML/MDS						Phase 1 dose escalation reported positive results; Part 2 dose expansion activated
APVO436 CD3/CD123	Redirected T cell Cytotoxicity	AML/MDS						Selected Participant: Leukemia/Lymphoma Society "Beat AML" Trial
ALG.APV-527* 4-1BB/5T4	T cell Co-Stimulation	Solid Tumors						CTA filing underway, FIH anticipated in 2021, Collaboration with Alligator Bioscience
APVO603 4-1BB/OX40	Dual T cell Co-stimulation	Solid Tumors						Unique asset for use in solid tumors, advancing lead candidate
APVO442 PSMA/CD3	Redirected T cell Cytotoxicity	Prostate Cancer (CRPC)						Low affinity CD3, advancing lead candidate

* *Partnered with Alligator Bioscience*

Part 2 of APVO436 Phase 1b Study Activated with Five Concurrent Expansion Cohorts

COHORT	
1	• Combination therapy in relapsed patients and those with primary, refractory AML with leukemia that failed to respond to frontline standard induction chemotherapy
2	• Combination therapy for AML patients in first relapse and as frontline in newly diagnosed AML patients with poor prognosis
3	• Monotherapy for consolidation after induction chemotherapy in AML patients with poor prognosis and AML patients with early first relapse (within one year of receiving frontline therapy)
4	• Combination therapy in AML patients who are in first remission with residual leukemia
5	• Monotherapy in AML patients who are in second remission with residual leukemia

Corporate Strategy

1. Concurrently advance optionality for lead candidate APVO436 via multi-center, five cohort phase 1 expansion trial

2. Develop and advance novel differentiated immuno-oncology product candidates using the ADAPTIR and ADAPTIR-FLEX platform technologies

3. Leverage pipeline potential by pursuing strategic collaborations and partnerships

4. Maximize non-dilutive funding opportunities to support efficient pipeline advancement

Platform Technologies

ADAPTIR – A Differentiated, Homodimer Bispecific Technology; Demonstrated Opportunity for Clinical Advancement

Modular and Flexible

- Monospecific and bispecific formats
- Reproducible generation of homodimeric bispecifics with desired mechanism of action and potency

Designed For Multiple Mechanisms of Action

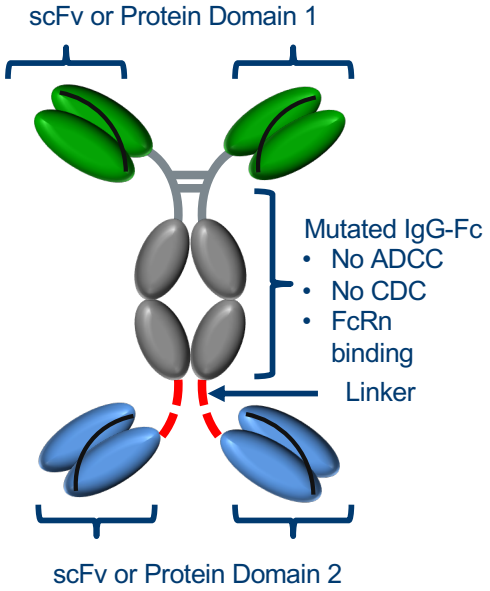
- Redirected T cell Cytotoxicity (RTCC)
- Tumor directed co-stimulation of immune receptors to re-engage immune response
- Dual receptor targeting that can stimulate or inhibit immune responses

Excellent Manufacturability Characteristics

- Antibody backbone increases stability
- Designed to minimize proteolytic cleavage and posT celltranslational modifications
- Standard manufacturing process with high yields and purity

Antibody-like Half-Life

- Half-life up to 12.5 days in rodents

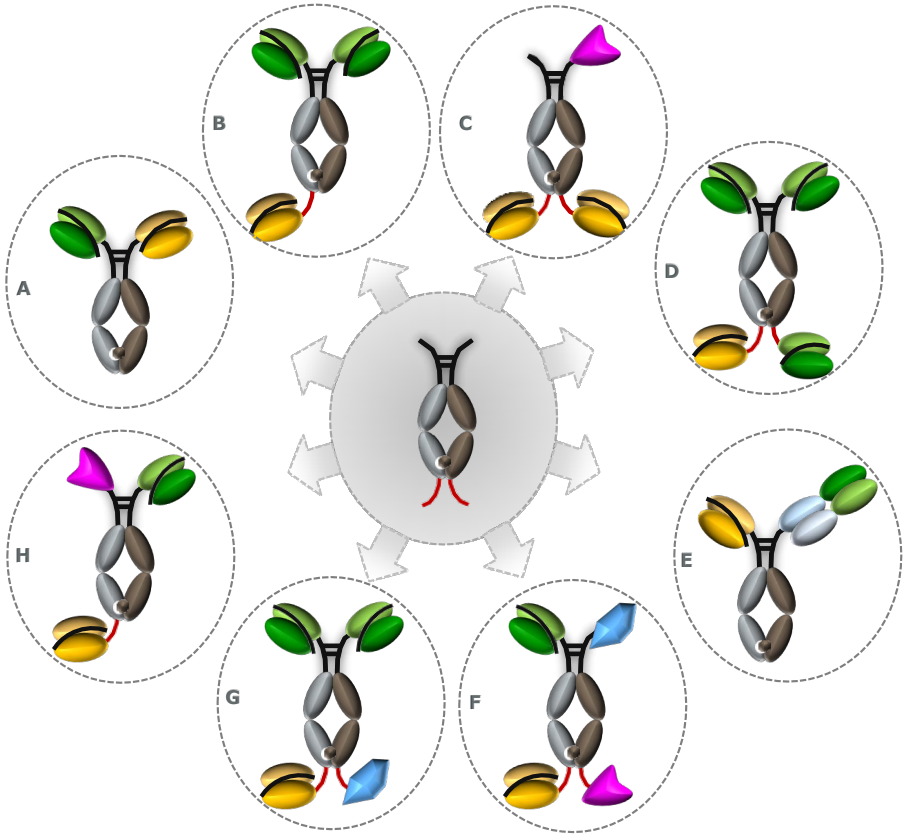


Lead candidate in clinical trials, multiple mechanisms being evaluated

ADAPTIR-FLEX: Heterodimer Platform Technology Overview

- Heterodimer platform technology designed to produce bispecific and multispecific drug candidates
- Leverages IgG1 Fc with “Knob in Hole” to assemble two different protein chains
- Enables binding, activating or blocking of up to four different targets
- Ability to mutate to eliminate Fc effector function
- Shares key features with ADAPTIR technology
  - IgG1 backbone and Fc mutations
  - Linkers

scFv domains from IgGs, extracellular domains (ECD) and cytokines with different specificities and functional properties



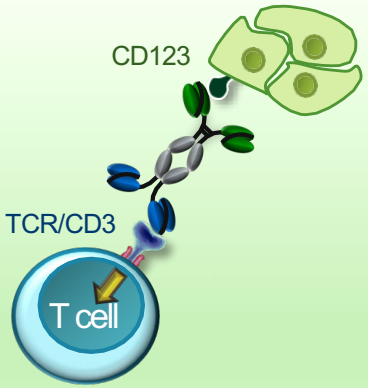
Evolutionary Platform Supports Drug Candidate Diversification

The Pipeline in Action

Powerful platform technologies produce candidates with multiple mechanisms against differentiated targets with the potential to treat both blood and solid tumor cancers

CD3 T cell Engager Targeting a Tumor Antigen

Polyclonal T cell activation

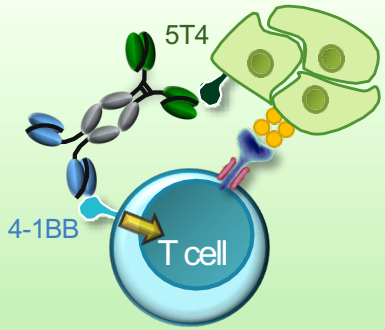


CD3 x CD123

APVO436

Tumor Antigen Dependent 4-1BB Co-stimulator

Stimulates existing anti-Tumor Response

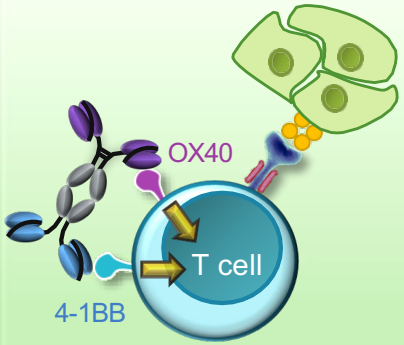


4-1BB x 5T4

ALG.APV-527

Dual TNFR Co-stimulator Targeting 4-1BB/OX40

Stimulates existing anti-Tumor Response

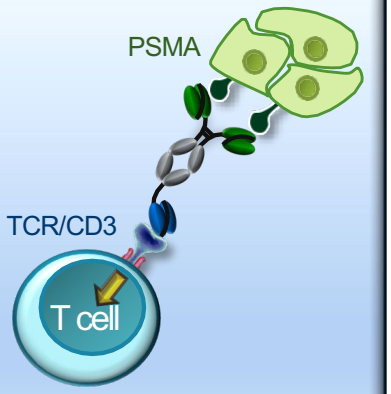


4-1BB x OX40

APVO603

Low Affinity CD3 T cell Engager Targeting a TAA

Polyclonal T cell activation for Solid Tumor Indications



Low Affinity CD3 x PSMA

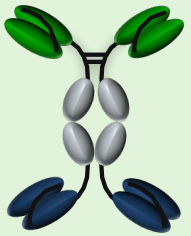
APVO442

ADAPTIR

ADAPTIR-FLEX

Therapeutic Candidates

APVO436 – Novel Immunotherapy Candidate for AML, Other Leukemias

CANDIDATE	 αCD123 scFv αCD3 scFv
OPPORTUNITY	▪ ADAPTIR (CD123 x CD3) T cell engager ▪ Preclinical studies showed key differentiation from another bispecific format*
TARGET/MOA	▪ CD123 - compelling target for AML due to its overexpression on leukemic stem cells and AML blasts; Designed to engage T cells via binding to CD3 to specifically kill tumor cells expressing CD123
POTENTIAL INDICATIONS	▪ AML, MDS, ALL, hairy cell leukemia, myelodysplastic syndrome ▪ Strong unmet need for safe and effective new therapies
DEVELOPMENT STAGE	▪ Phase 1 study dose escalation in R/R AML and MDS complete ▪ Phase 1 study dose expansion in AML activated ▪ Orphan drug designation granted by FDA for AML ▪ Selected for inclusion in BEAT AML Master Clinical Trial to evaluate APVO436 in frontline AML setting
PARTNERSHIP STATUS	▪ Wholly-owned by Aptevo

*Aptevo-generated version of Macrogenics' CD123 x CD3 dual-affinity re-targeting (D.A.R.T) molecule, MGD006

The AML / MDS Market*

Strong Unmet Need for Novel Therapies that Improve Outcomes and Survival

- AML: 21,000 new cases/year in U.S. 10,500 deaths/year in U.S.*
  - Average age 67 years / 5-year survival 26%*
- MDS: 10,000 – 20,000 new cases/year in U.S.**
  - One in 3 patients with MDS will progress to have AML**
- The global AML market is expected to grow from $1.4B in 2019 to $5.1B in 2029 at a compound annual growth rate (CAGR) of 13.6%**
- The U.S. accounts for 65% of total market share and is expected to continue to experience strong growth at a CAGR of 11.9%, through 2029**
- The introduction of immunotherapies is expected to be successful in AML, which will occupy 13% of the market by 2029**

*American Cancer Society, Seer.cancer.gov
**Global Data 2018

APVO436 Clinical Program Overview

Multi-Center, Multi-Arm Phase 1 Open-Label Clinical Trial	
Study Design	Part 1/Dose escalation: Determine maximum tolerated dose and recommended dose for Part 2/Expansion (Complete) Part 2/Expansion: Assess clinical activity at recommended dose (Activated)
Administration	Part 1: Intravenous (IV) dosing weekly for six 28-day cycles Part 2: IV administration, four cycles of therapy, each cycle consists of weekly infusions over a 28-day period
Subjects	Part 1/Dose escalation: 46 patients Part 2/Expansion: 90 patients
Status	Aptevo reported positive data from the dose escalation part of the trial on May 26, 2021 Aptevo reported that the expansion part of the trial was active and will include five concurrent cohorts of 18 patients each, on May 27, 2021

APVO436 in Phase 1: Part 1/Dose Escalation Topline Data

Overview

46 patients with AML or myelodysplastic syndrome

- Primary endpoint achieved: RP2D identified
- APVO436 demonstrated manageable side effects and was well tolerated in the patient population
- Signs of clinical activity - both stabilization of leukemia and complete remissions, observed

APVO436 in Phase 1: Part 2/Expansion

Overview

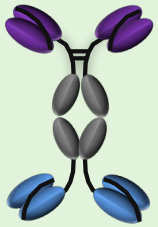
5 cohorts initiated simultaneously at up to 20 trials sites in the U.S. - 18 patients per cohort, 90 patients, total

Cohort	
1	**Relapsed AML patients:** Combination therapy in relapsed patients and those with primary, refractory AML with leukemia that failed to respond to frontline standard induction chemotherapy. Patients will be treated with the standard chemotherapy drug cytarabine or the standard chemotherapy triple drug combination MEC (mitoxantrone, etoposide, cytarabine) plus APVO436
2	**AML patients in first relapse** will receive a combination of APVO436 + venetoclax + azacitidine. Also included in this cohort will be newly diagnosed AML patients with a poor prognosis who will receive this novel combination as their frontline induction regimen
3	**AML patients with poor prognosis and with early first relapse (within one year of receiving frontline therapy)** will receive frontline chemotherapy to induce a remission and APVO436 will be added if there is evidence of residual leukemia
4	**Combination therapy in AML patients who are in first remission with residual leukemia** (also known as minimal residual disease (MRD)), will receive the standard drug oral azacytidine in combination with APVO436
5	Monotherapy in **AML patients who are in second remission with residual leukemia**

Summary: APVO436

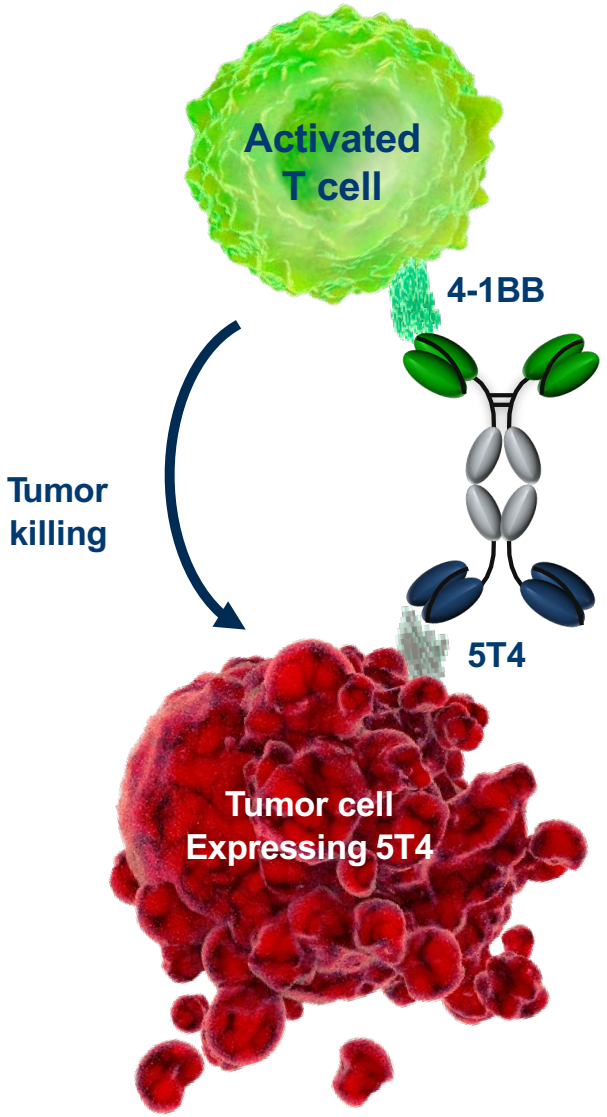
- A bispecific T cell engager candidate designed to target CD123 x CD3
  - Designed to result in potent T cell mediated killing of CD123+ tumors (no killing without target present)
  - Reduced cytokines observed in preclinical studies compared to Aptevo-generated version of flotetuzumab
  - Binding confirmed to cynomolgus monkey CD3 and CD123 ex-vivo
- Half-life of 12.5 days in rodents and 4.5 days in NHPs
- Preclinical *in vivo* proof-of-concept established in multiple xenograft tumor models
- High titer CHO cell clone production levels ~1.5 g/L
- Good manufacturability attributes
- Status of Phase 1b Clinical Trial
  - Dose Escalation part: Favorable safety profile; the recommended Phase 2 dose level (RP2D) identified (press release on May 26, 2021)
  - Dose Expansion part: At designed recommended Phase 2 dose (RP2D) and IRB-approved with 5 independent, parallel cohorts (press release on May 27, 2021)

ALG.APV-527 – Broad Potential Therapeutic Opportunity in Solid Tumors

CANDIDATE	 **α4-1BB scFv** **α5T4 scFv**
OPPORTUNITY	• Designed to engage T cells through co-stimulatory receptor 4-1BB
TARGET/MOA	• Targets 4-1BB (co-stimulatory receptor) and 5T4 (tumor antigen) • Designed to reactivate antigen-primed T cells to specifically kill tumor cells; Designed to promote CD8 T cell survival and effector function
POTENTIAL INDICATIONS	• Multiple solid tumor indications: breast, cervical, non-small-cell-lung, prostate, renal, gastric, colorectal and bladder cancers
DEVELOPMENT STAGE	• Advance into clinical development with Alligator Bioscience in solid tumors expressing 5T4. First patient in dosing planned for 4Q21
PARTNERSHIP STATUS	• Joint 50/50 ownership & co-development agreement with Alligator Bioscience

ALG.APV-527 Targeted Immunotherapeutic Bispecific Antibody Candidate Targeting 4-1BB x 5T4

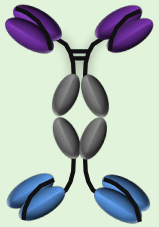
- Designed to simultaneously target
  - 4-1BB is a costimulatory receptor, member of TNFR super family
  - 5T4 is an oncofetal tumor antigen
- Promising approach for targeted immunotherapy designed to:
  - Target T cells previously activated by tumor antigen
  - Exert tumor-localized T cell activation upon 5T4 binding
  - Not stimulate all (resting or naive) T cells
- Potential Advantages:
  - Improved efficacy and safety (targeted therapy)
  - Opportunity to treat multiple solid tumors expressing 5T4 antigen (e.g. NSCLC, renal, pancreas, prostate, breast, ovarian, cervical)



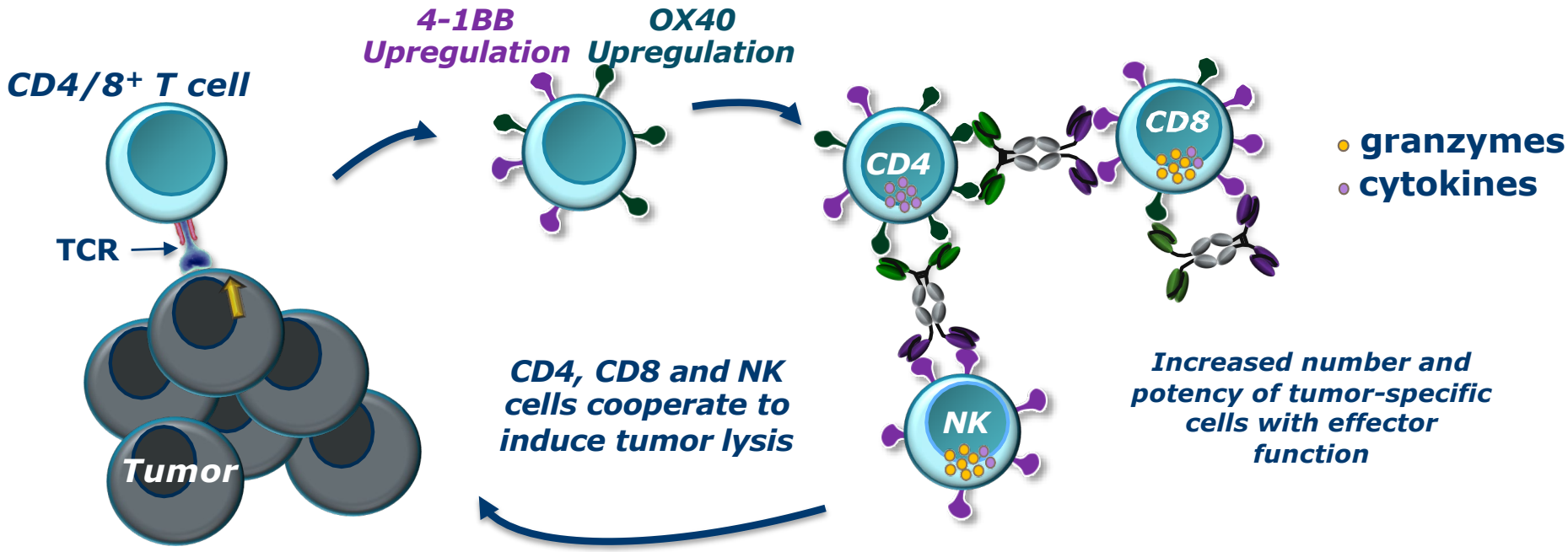
Summary: ALG.APV-527

- Limited potential competition
- Designed for 5T4-dependent tumor-directed T cell activation to overcome dose-limiting toxicities seen with 4-1BB mAbs
- Optimized in the ADAPTIR format for activity, solubility, stability and manufacturability properties
- 5T4-dependent T cell and NK-cell proliferation and activation, 5T4-driven tumor localization, and anti-tumor efficacy observed in preclinical studies
- Advancing into clinical development with Alligator Bioscience in solid tumors expressing 5T4. First patient in dosing planned for Q4 2021

APVO603: Dual Agonistic Bispecific Antibody Candidate

CANDIDATE	 **α4-1BB scFv** **αOX40 scFv**
OPPORTUNITY	• Designed to simultaneously target 4-1BB and OX40 both members of the TNF-receptor family
TARGET/MOA	• Targets two costimulatory receptors 4-1BB and OX40 • Designed to provide synergistic co-stimulation of T cells to potentially amplify the cytotoxic function of activated T cells and NK cells; potential to promote more robust anti-tumor responses
POTENTIAL INDICATIONS	• Solid tumor indications; based on previous anti-tumor T cell response
DEVELOPMENT STAGE	• Preclinical • IND-enabling and CMC activities initiated • CMC activities in progress
PARTNERSHIP STATUS	• Wholly-owned by Aptevo

Designed to Activate Multiple Immune Pathways to Increase Anti-Tumor Response and Reduce Toxicity*



Potential Key Advantages:

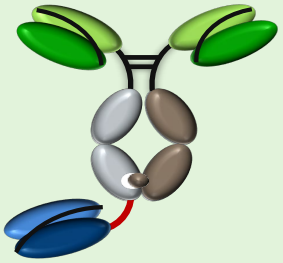
- Enhancement of pre-existing anti-tumor responses
- Enhancement of all effector lymphocyte populations: CD4, CD8 and NK cells
- Potential to reduce toxicities observed for competitor 4-1BB monospecific antibodies; APVO603 is designed to limit non-specific activation of lymphocytes

*Based on data from *in vitro and in vivo* preclinical studies

Summary: APVO603

- APVO603 is a novel ADAPTIR bispecific with a unique mechanism of action that may boost natural anti-tumor responses by activating two different co-stimulatory receptors
- Application in multiple solid tumor indications to reinvigorate immune responses and enhance tumor rejection
- Preclinical studies POC achieved: Demonstrated synergistic activation of CD4 and CD8+ T cell and NK cell activation in addition to enhanced tumor cell lysis
- Lead candidate identified; CMC activities initiated
- IND-enabling studies underway

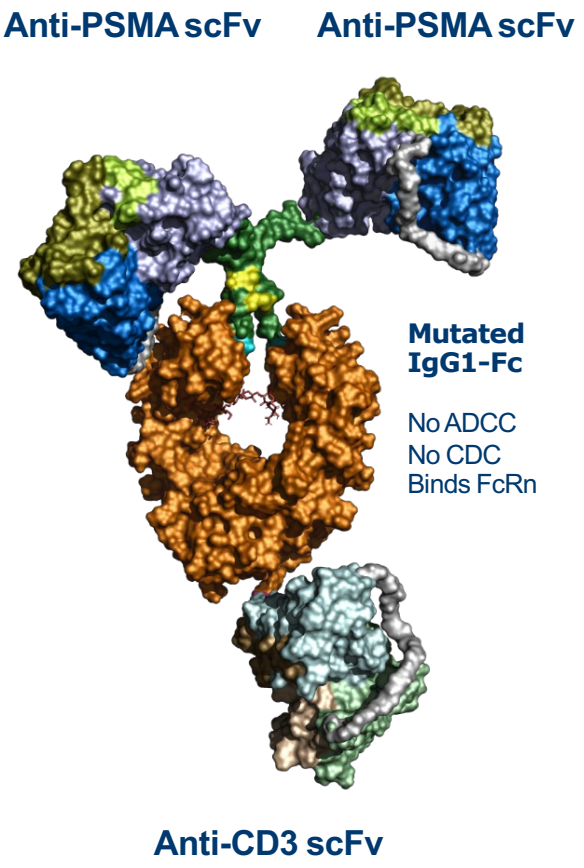
APVO442 A Novel Immunotherapy Designed for Prostate Cancer

CANDIDATE	 **Anti-PSMA scFv** **Mutated IgG1-Fc** No ADCC No CDC Binds FcRn **Anti-CD3 scFv**
OPPORTUNITY	• αPSMA x αCD3 (low affinity) T cell Engager
TARGET/MOA	• Engages T cells via CD3 epsilon to lyse tumor cells expressing PSMA • Low-affinity CD3 reduces binding to circulating T cells • Designed to enable better biodistribution to solid tumors • Low levels of cytokines demonstrated in preclinical studies
POTENTIAL INDICATIONS	• Metastatic Castration-resistant prostate cancer and other PSMA(+) tumors
DEVELOPMENT STAGE	• Lead candidate selected • Pre-clinical studies ongoing
PARTNERSHIP STATUS	• Wholly-owned by Aptevo

Low Affinity Anti-CD3: Designed to Improve Solid Tumor Biodistribution

APVO442 uses ADAPTIR-FLEX technology to achieve a "2+1" bispecific

- Bivalent, high affinity binding to PSMA
- Monovalent, low-affinity variant of anti-CD3 domain used in APVO436
  - Retains low cytokine release of previous anti-CD3 ADAPTIR candidates
  - Retains stability/manufacturability of previous candidates
- Optimized affinities designed to maximize distribution to prostate tumors
  - Minimize binding to circulating T cells
- Fc mutations to minimize Fc receptor and complement binding and activity
- Modular technology applicable to build CD3-engagers against other solid tumors



Summary: APVO442

- APVO442 based on ADAPTIR-FLEX Platform Technology
  - Designed to minimize binding to circulating T cells, and maximize distribution to PSMA+ solid tumors
  - Good manufacturability attributes
- Preclinical data demonstrating potent T cell engager targeting PSMA and CD3
  - Potent T cell mediated killing of PSMA+ tumors *in vitro* and in a mouse model of disease
    - No killing without target present
  - Reduced cytokines observed in preclinical studies compared to competitor molecule
- Antibody-like half-life in rodents (~9 days)
- Preclinical *in vivo* proof-of-concept established in C4-2B xenograft tumor models

The Company

Financial Snapshot

- Effective 03/30/21: Sold RUXIENCE® Royalty Stream (Pfizer rituximab biosimilar) to an entity managed by HealthCare Royalty Management, LLC ("HCR") for $35 million up front, plus additional milestones of up to $32.5 million.

- Upon achievement of HCR aggregate royalty payments totaling 190% of the upfront amount plus milestones paid, Aptevo is also entitled to 50% of any royalty payments made by Pfizer thereafter. Milestones may be earned based on net sale performance of RUXIENCE as follows:

Year	Total Maximum Milestones earnable per year (millions)
2021	$10
2022	$12.5
2023	$10

- If earned, collection of the above milestones will provide further non-dilutive funding to the Company

Anticipated Milestones: 2021-2022

Development/Clinical

- Initiate and complete APVO436 Phase 1b dose expansion trial (five concurrent cohorts of 18 patients per cohort)
- Present Phase 1 dose escalation data at a major oncology conference
- Advance ALG.APV-527 into clinical development in collaboration with Alligator Bioscience
  - Evaluate potential in solid tumors expressing 5T4. First-in-human dosing planned for Q4 2021
- APVO603; initiate IND-enabling studies
- Advance preclinical development of APVO442
- Explore potential of additional candidate(s) using ADAPTIR and/or ADAPTIR-FLEX platform technologies

Operational/Financial

- Collect quarterly IXINITY® royalties
- Collect potential HCR milestone payments, based on RUXIENCE net sales
- Continue current and initiate future partnering discussions around product candidates as well as ADAPTIR and ADAPTIR-FLEX platform technologies

Why Aptevo

1 Expertise
Established leadership position designing protein-based therapeutic candidates for cancer

2 Technology
Proprietary, versatile, differentiated ADAPTIR and ADAPTIR-FLEX platform technologies that enable generation of new pipeline candidates

3 Achievement
Advancing pipeline of clinical and preclinical bispecific candidates, APVO436 leading the way

4 Opportunity
Deep portfolio offers multiple opportunities for collaborations and partnerships

5 Value
Cash runway into Q2 2022
Ability to complete all planned clinical trials with cash on hand

Focused, innovative and driven in the fight against cancer

Aptevo Therapeutics

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Email: ir@apvo.com or Millerm@apvo.com

NASDAQ: APVO