

June 2017

Forward-looking statements

This presentation contains forward-looking statements. These forward-looking statements are subject to risks and uncertainties, including the factors described under the Risk Factors section of our most recent Annual Report on form 10-K or Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission and made available on our website at www.agenusbio.com. When evaluating Agenus' business and prospects, careful consideration should be given to these risks and uncertainties. These statements speak only as of the date of this presentation, and Agenus undertakes no obligation to update or revise these statements. This presentation and the information contained herein do not constitute an offer or solicitation of an offer for sale of any securities.

Agenus: Broad I-O Portfolio

Multi-modal I-O Therapy

Immunomodulatory Antibodies

shape endogenous immune response

Vaccines

educating the immune system

Cell Therapy^

augment the immune system

PRODUCT CANDIDATES	DISEASE/TARGET	PARTNER	PRECLINICAL	PH1	PH2	PH3	FILED
Checkpoint Antibodies							
AGEN1884	CTLA-4 (antagonist)*						
next-gen CTLA-4	CTLA-4 (antagonist)						
AGEN2034	PD-1 (antagonist)*x						
	4-1BB (agonist)						
	TIGIT (antagonist)						
INCAGN1876	GITR (agonist)	Incyte					
INCAGN1949	OX40 (agonist)	Incyte					
	TIM-3 (antagonist)	Incyte					
	LAG-3 (antagonist)	Incyte					
	Undisclosed	MERCK Incyte					
Vaccines							
Prophage™	Glioblastoma (newly diagnosed)						
AutoSynVax™	Cancers						
PhosphoSynVax™	Cancers						
Adjuvant QS-21 Stimulon®	Shingles	gsk					
	Malaria	gsk					

* AGEN1884 (IgG1 isotype) and AGEN2034 are partnered with Recepta for certain South American rights

x Anticipated in cervical cancer; potentially in combination with AGEN1884

^ Program expected to advance through separate business entity with external funding

Agenus Five Year Growth Plan:

- **Advance on most rapid path to BLA**
  - Develop, register, and launch anti-PD-1/CTLA-4 mAb combinations in validated indications
  - Pursue novel breakthrough indications to expedite market entry

- **Leverage novel targets for market expansion**
  - Pursue optimal I-O mAb and vaccine combinations with anti-CTLA-4 +/- anti-PD-1
  - Progress Incyte partnered programs (GITR, OX40, TIM-3, LAG-3) towards registration
  - Advance Ab programs against innovative targets (including TIGIT, 4-1BB) to the clinic
  - Engage in strategic partnerships

Current partnerships

- QS-21 Stimulon®: adjuvant for Shingrix®
- GSK filed for registration in U.S., Japan, Canada and Europe
- Royalties and milestones partly monetized

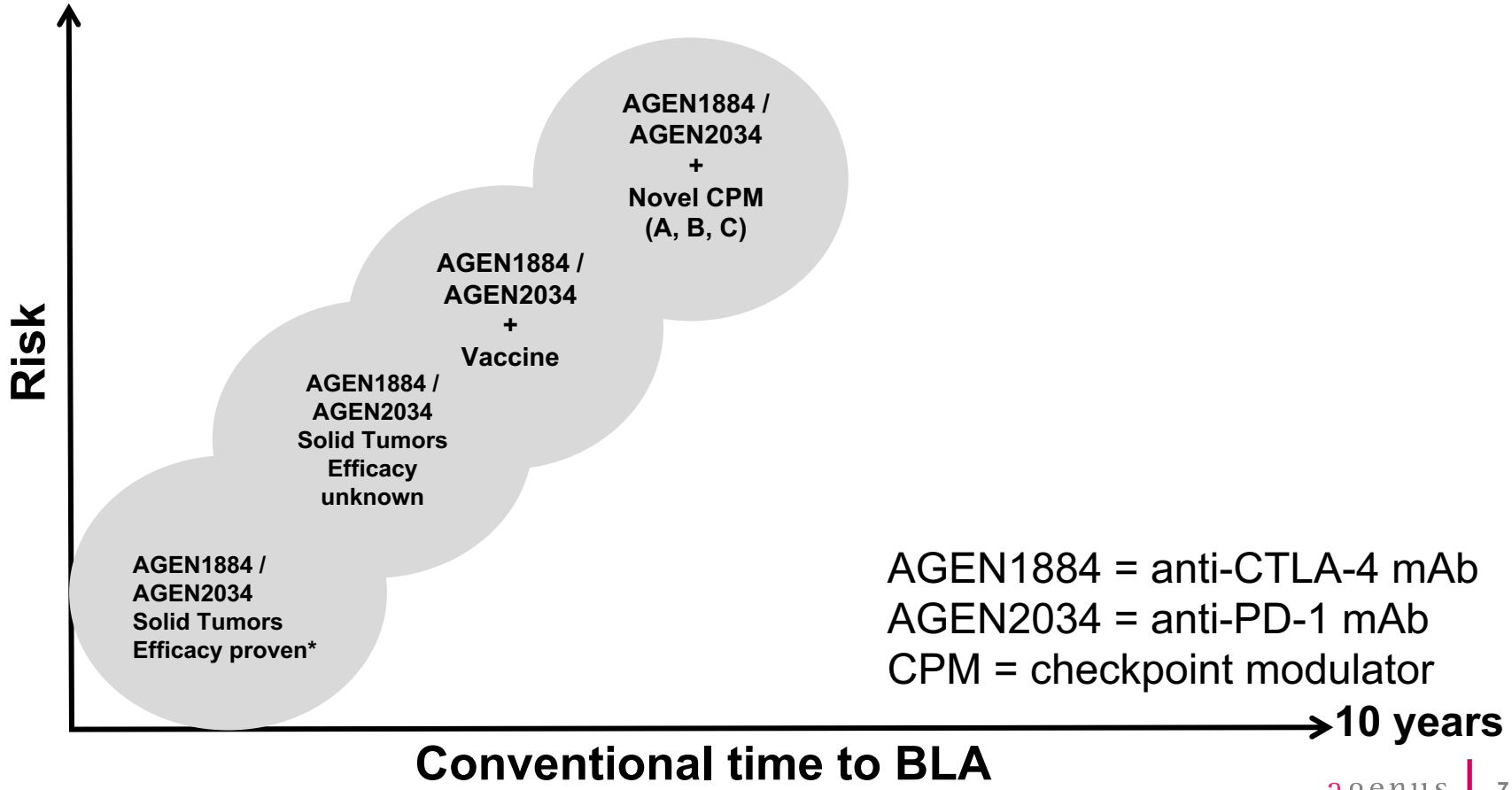
- 1 undisclosed target
- Lead selection completed
- Up to $100 million in milestones

- Preclinical: LAG-3, TIM-3, 1 undisclosed
  - Royalty rates are generally 6-12%
- Clinical: GITR, OX40
  - Royalty rate 15%
- Up to $510 million in milestones across all programs



Clinical Strategy

New clinical development paradigm compressed



AGEN1884 = anti-CTLA-4 mAb
AGEN2034 = anti-PD-1 mAb
CPM = checkpoint modulator

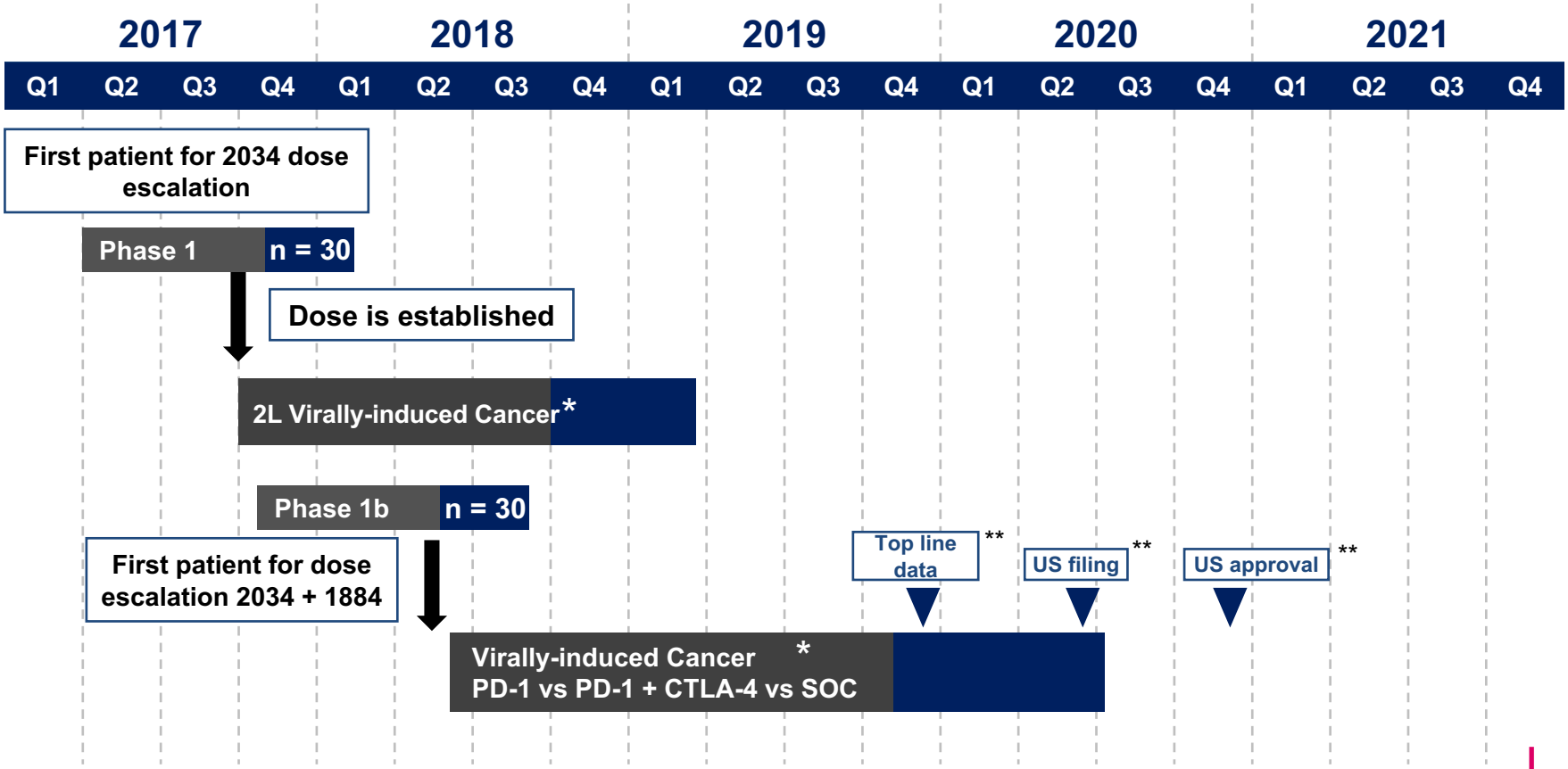
* For commercially available third party CTLA-4 and PD-1 antibodies

anti-CTLA-4 + anti-PD-1: first clinically validated I-O mAb combo

- **anti-CTLA-4 (low dose) combined with anti-PD-1/PD-L1 is the only validated mAb combination with improved efficacy and safety profile**
  - Near doubling of clinical response - from ~25% to ~57% in NSCLC[1]
  - Control of CTLA-4 + PD-1/PD-L1 targeted therapies could offer a pricing advantage
  - Provides a foundation for mAbs against novel checkpoints that are yet to show efficacy in the absence of CTLA-4 antagonism

1. Hellmann *et al.* Lancet Oncol 2017

AGEN2034 (anti-PD-1) and AGEN1884 (anti-CTLA-4): projected path to BLA



* Anticipated in cervical cancer
** Projections



At the forefront – differentiating with novel mechanisms

Integrated antibody discovery technologies, combined with immunology expertise

Platforms:

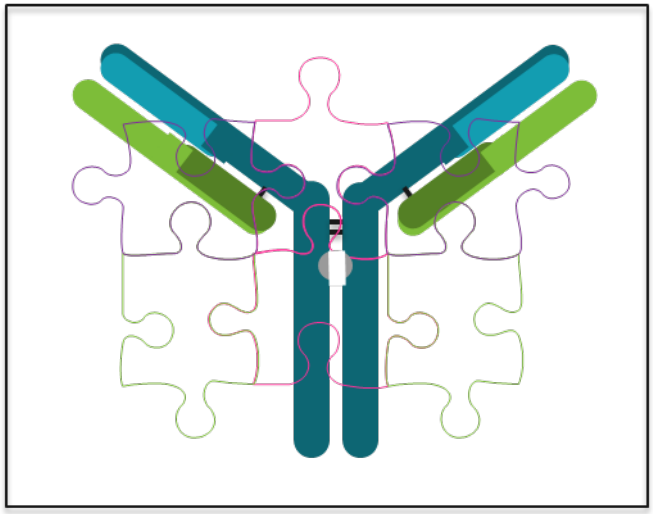
- **Phage Display**
  ScFv format - diversity $>10^{10}$
- **Yeast Display**
  Full length IgG display *via* biotin capture - diversity $>5x10^{9}$
- **Retrocyte Display™**
  Fully human IgG repertoire displayed on pre-B cells - diversity $>10^{9}$

Optimization:

- **Fc-engineering**
  Modulation of effector function
  Enhanced clustering
  Bi-specific antibody technologies
- **Computational Biology**
  Bioinformatics
  Structure-guided optimization
  Epitope analysis

Mechanism:

- **Immuno-Biology**
  Disease relevant immuno-assays to establish MOA to meet DTPP including; epitope, affinity, internalization Fc etc…
- **Development Platform**
  Agenus West GMP facility
  Extensive internal development expertise
  ~2,000L Production scale (Phase I/II supply)



AutoSynVax™ - clinical-stage neoantigen vaccine



AutoSynVax™

- **Potential best-in-class vaccine blueprint and QS-21 Stimulon® adjuvant**
- Clinically validated platform demonstrated POM in viral setting
- Long-term memory response (preclinical)
- MHC class I and II presentation
- Optimized delivery and peptide sparing
- End-to-end logistics: 20 years operational & FDA audited

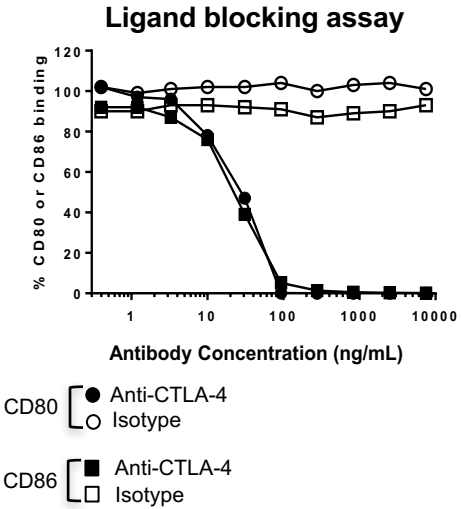
Clinical Status

- Trial is FDA cleared and open (NCT02992977)
- **Phase 1 ongoing and fully enrolled**
- Safety & immunological readout expected H2 2017
- One of only three known individualized neoantigen vaccines in clinical development

Anti-CTLA-4 antibodies – advancing innovation

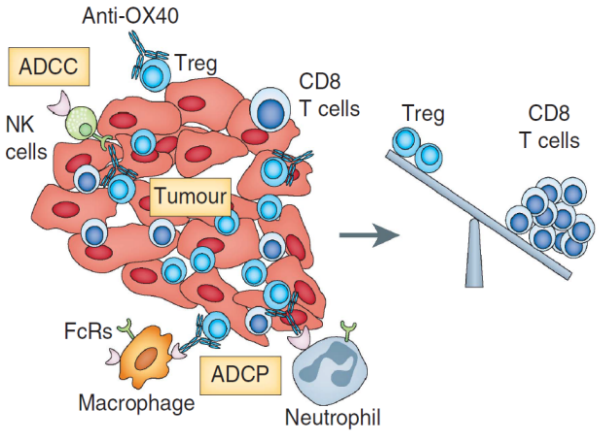
Mechanism #1

Blockade of CD80 & CD86 binding to CTLA-4



Mechanism #2

Depletion of intratumoral Tregs *via* co-engagement of FcγRs



Smyth M. et al., ICB 2014
Bulliard Y. et al., ICB 2014
Bulliard Y. et al., JEM 2013
Simpson et al., JEM 2013
Shelby et all., Can. Immunol. Res. 2013

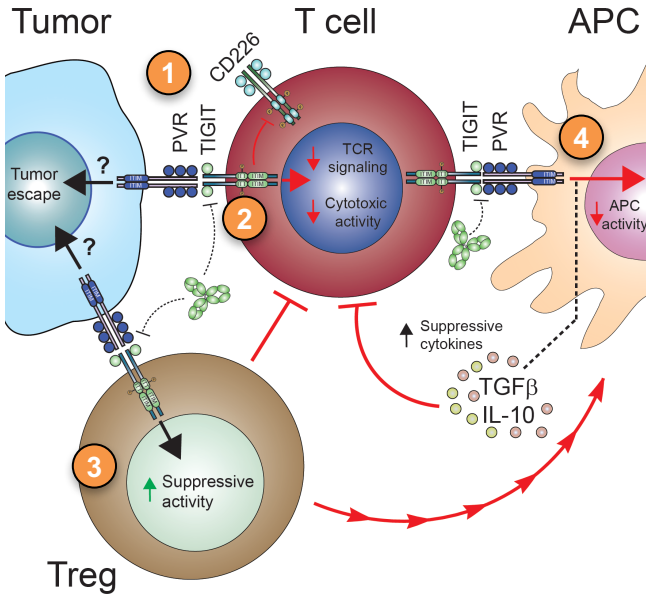
Mechanism #3 (Distinct)

CTLA-4 is a validated and foundational target with demonstrated clinical relevance

Agenus' lead anti-CTLA-4 IgG1 is advancing in the clinic with combination trials planned for 2H 2017

Agenus is also advancing a novel IgG1 antibody that exhibits a distinct mechanism for CTLA-4 antagonism

TIGIT: Potent novel negative regulator of immune synapse



Manieri et al., 2016

TIGIT modulates the innate and adaptive arms of the immune system to impair productive anti-tumor immunity

- Antibody blockade of TIGIT combines effectively with other immune modulators (co-inhibitory and co-stimulatory antibodies) to promote tumor rejection in preclinical mouse tumor models. *Example: PD-1/PDL-1 pathway*

1. Prevention of CD226 co-stimulation
2. TIGIT-induced suppression of T and NK cells
3. Enhance Treg suppressive activity
4. Induce immunosuppressive DCs (↑IL-10)

Combinations are Novel

1st Generation
Monotherapy activity

✓



PD-1

CTLA-4

+

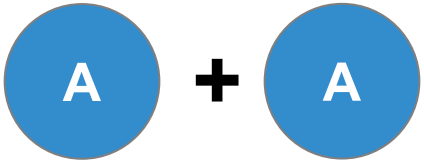
2nd Generation
Monotherapy

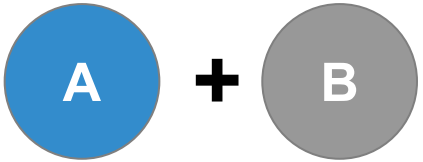


GITR
OX-40
TIGIT
CD137
Vaccines
Cell Therapy

=

3rd Generation
Highly active combinations







Cell Therapy Program

Agenus ⇄ NewCo = seeking curative combination approaches

agenus

Immunomodulatory Antibodies

Improve body's existing immune attack on cancer

NewCo

Vaccines

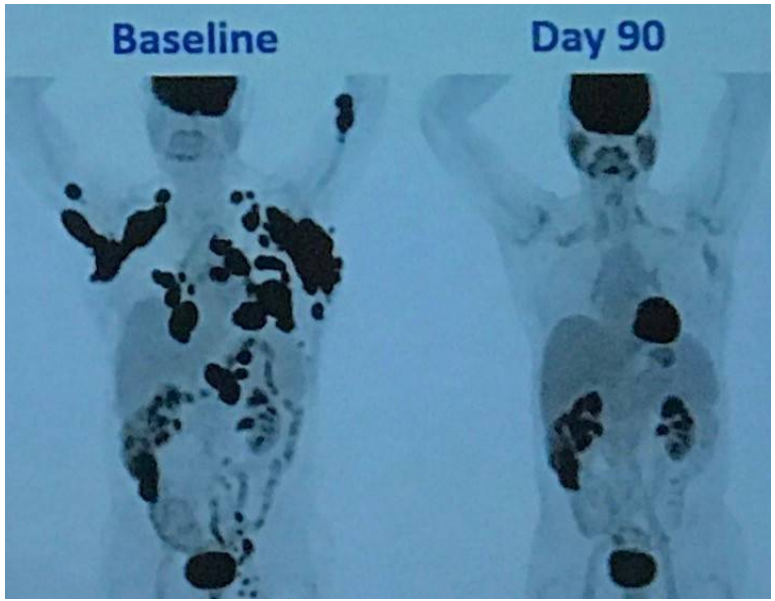
educating the immune system takes time

Cell Therapy^

Launch rapid immune attack against cancer

^ Program expected to advance through separate business entity with external funding

Cell therapy is curing previously incurable leukemia and lymphoma patients



ASH2016 ZUMA-1 in DLBCL

The Promise

✓ Potential for curative benefit with improved safety

✓ Opportunity to expand effectiveness through combinations (antibodies, vaccines, cell therapy)

The Challenges

✓ Autologous approach is lengthy, cumbersome, and expensive

✓ Autologous CAR-T approaches linked to safety issues and patient deaths

✓ **Current products have limited efficacy in solid tumors, the majority of cancers**

NewCo: cancer cell therapy differentiated



Molecular Targeting with proprietary algorithms and platforms

Proprietary Phosphopeptide Tumor Targets

- Proprietary targets and discovery capabilities synergistic with vaccine program
- Cancer-specific
- Shared among patients for off the shelf approach



T-Rx Mammalian Display

Safety Scan

- Natural, fully human
- Engineered to optimally balance efficacy and safety



Cell format

- “Off the shelf” / easy to produce, easy to administer
- Potential for improved safety
- Potentially effective in both hematologic and solid tumors

Recent accomplishments & projected milestones

2016/2017

Accomplishments

- **Four CPM mAbs in clinic**
  - CTLA-4 antagonist (AGEN1884)*
  - GITR agonist (INCAGN1876)**
  - OX40 agonist (INCAGN1949)**
  - PD-1 antagonist (AGEN2034)* monotherapy
- **Vaccine platforms**
  - AutoSynVax™ in clinic
- **Clinical Development team with I-O development success on board**
- **QS-21 Stimulon® adjuvant containing Shingles vaccine filed for regulatory approval**

2017

Clinical Deliverables

- **Clinical trials**
  - Initiate virally-induced cancer+ trial (2L)
  - Initiate Ph 1b with AGEN1884* with AGEN2034*
- **Clinical results**
  - Optimal monotherapy dose for AGEN2034*
  - Optimal combination dose of AGEN2034* + AGEN1884*
- **Clinical responses**
  - Data from 30 patients
  - Initial immune biomarker data from 6-patient Ph 1 ASV proof-of-mechanism trial

2018

Clinical Activity & Readouts

- **Complete enrollment for 2nd line virally-induced cancer+ cohort**
- **Top line data for the virally-induced cancer+ cohort**:
  - Response rate
  - Duration of response
  - Safety and tolerability

* Partnered with Recepta for certain South American rights
** Partnered with INCY
+ Anticipated in cervical cancer

Leadership

- **Garo Armen, PhD, Chairman & CEO**
  Elan Corporation, plc, Protagenic Therapeutics, Founder - Children of Armenia Fund (COAF)
- **Ozer Baysal, Chief Business Officer**
  Pfizer, Harvard Business School
- **Jennifer Buell, PhD, VP Research & External Affairs**
  Harvard Clinical Research, Bristol-Myers Squibb
- **Christian Cortis, PhD, VP Business Development**
  Synta Pharmaceuticals, Advanced Technology Ventures, Columbia University
- **Jean-Marie Cuillerot, MD, Chief Medical Officer**
  EMD Serono, Bristol-Myers Squibb, Novartis, University Louis Pasteur
- **Alex Duncan, PhD, Chief Technology Officer**
  Actigen, Affitech A/S, Astra Zeneca, Cambridge Antibody Technology
- **Christine Klaskin, VP Finance**
  Arthur Andersen, George Washington University
- **Michelle Linn, VP Corporate Communications**
  Linnden Communications, Ogilvy PR/Feinstein Kean, Chair of Women In Bio Boston Chapter
- **Robert Stein, MD, PhD, Senior R&D Advisor**
  Incyte Pharmaceuticals, Ligand Pharmaceuticals, Dupont/Merck, Roche, KineMed, Merck, Sharp & Dohme
- **Karen Valentine, JD, Chief Legal Officer & General Counsel**
  Palmer and Dodge LLP