AnaptysBio

Corporate Overview

September 17, 2020

Nasdaq: ANAB

Safe Harbor Statement

This presentation and any accompanying oral presentation contain “forward-looking” statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to: the timing of the release of data from our clinical trials, including etokimab’s week 16 data for the Phase 2 clinical trial in adult chronic rhinosinusitis with nasal polyps patients and imsidolimab’s Phase 2 trials in GPP and PPP patients; the timing of initiation of imsidolimab’s Phase 2 trials in EGFRi /MEKi and ichthyosis; the timing of a regulatory strategy update for GPP; the timing of an IND filing for ANB032; the milestones and success of our GSK collaboration; and our projected 2020 cash burn and cash runway. Statements including words such as “plan,” “continue,” “expect,” or “ongoing” and statements in the future tense are forward-looking statements. These forward-looking statements involve risks and uncertainties, as well as assumptions, which, if they do not fully materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. Forward-looking statements are subject to risks and uncertainties that may cause the company’s actual activities or results to differ significantly from those expressed in any forward-looking statement, including risks and uncertainties related to the company’s ability to advance its product candidates, obtain regulatory approval of and ultimately commercialize its product candidates, the timing and results of preclinical and clinical trials, the company’s ability to fund development activities and achieve development goals, the company’s ability to protect intellectual property and other risks and uncertainties described under the heading “Risk Factors” in documents the company files from time to time with the Securities and Exchange Commission. These forward-looking statements speak only as of the date of this presentation, and the company undertakes no obligation to revise or update any forward-looking statements to reflect events or circumstances after the date hereof.

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AnaptysBio: Clinical-Stage Novel Antibody R&D Engine

Advancing First-In-Class Immunology Therapeutics to Patients

Multiple Clinical Catalysts	Upcoming catalysts include GPP and PPP Phase 2 data (imsidolimab), EGFRi-mediated skin toxicity and ichthyosis Phase 2 initiation (imsidolimab), Phase 1 clinical data (ANB030) and new IND filing (ANB032)
Validated Platform	Rapid antibody R&D engine has advanced 7 internally-generated antibodies to clinical development since 2016
Novel Immunology Pipeline	Focused on first-in-class inflammation and immuno-oncology mechanisms, advancing 1 new program to IND each year
Accelerating Partnership Revenues	Approximately $100MM in partnership revenues received to date, additional $20MM milestone and royalties anticipated following dostarlimab US BLA approval in H2 2020
Capital Efficient Business Model	Cash and existing partnerships anticipated to extend runway into 2023, $392MM in cash (end Q2 2020) with projected 2020 net burn of ~$60MM

Wholly-Owned Product Pipeline

7 AnaptysBio-Generated Antibodies Advanced to Clinical Development Since 2016

Antibody Program	Therapeutic Indication	Development Stage & Anticipated Milestones					Commercial Rights
		Discovery	Preclinical	Phase 1	Phase 2	Phase 3	
Imsidolimab (ANB019): Anti-IL-36R	Generalized Pustular Psoriasis			Phase 1 Data Presented at EAACI 2018	GALLOP: Clinical & Regulatory Update Q4 2020 FDA Orphan Drug Designation Received		AnaptysBio
	Palmoplantar Pustulosis				POPLAR: Phase 2 Top-Line Data Q1 2021		
	EGFRi-Mediated Skin Toxicity				Phase 2 Initiation Q4 2020		
	Ichthyosis				Phase 2 Initiation Q4 2020		
Etokimab (ANB020): Anti-IL-33	Atopic Dermatitis			Phase 1 Data Presented at AAD and AAAAI 2017	Phase 2a Data Presented at AAD and EAACI 2018 Discontinue Development		
	Eosinophilic Asthma				Phase 2a Data Presented at EAACI 2019 Phase 2b On-Hold		
	Chronic Rhinosinusitis With Nasal Polyps				ECLIPSE: Phase 2 Complete Data Year-End 2020		
ANB030: Anti-PD-1 Agonist	Inflammatory Diseases			Phase 1 Top-Line Data Mid-2021			
ANB032: Anti-BTLA Modulator	Inflammatory Diseases		IND Filing Anticipated Q4 2020				

All programs generated internally using AnaptysBio's proprietary antibody platform technology

Partnered Product Pipeline

7 AnaptysBio-Generated Antibodies Advanced to Clinical Development Since 2016

Antibody Program	Therapeutic Indication	Development Stage & Anticipated Milestones	Commercial Rights
Dostarlimab (GSK4057190): Anti-PD-1 Antagonist	dMMR Endometrial Cancer	US BLA Approval Anticipated H2 2020, EMA MAA Filing Accepted	gsk
	dMMR Pan-Tumor	Regulatory Filing Anticipated H1 2021	
	Ovarian Cancer	MOONSTONE & OPAL: Ongoing; FIRST: Ongoing	
Cobolimab (GSK4069889): Anti-TIM-3 Antagonist	Immuno-Oncology	AMBER: Dostarlimab Combination Trial Ongoing	
GSK4074386: Anti-LAG-3 Antagonist	Immuno-Oncology	CITRINO: Dostarlimab Combination Trial Ongoing	
TSR-075: Anti-PD-1/ LAG-3 Bispecific	Immuno-Oncology	IND-Enabling Studies Ongoing	
CC-90006: Anti-PD-1 Agonist	Psoriasis	Ongoing	Bristol-Myers Squibb
Undisclosed	Inflammation	Ongoing	

All programs generated internally using AnaptysBio's proprietary antibody platform technology

Anticipated Wholly-Owned Pipeline Catalysts

Program	Clinical Catalyst	Anticipated Timing
Imsidolimab (ANB019, anti-IL-36R)	GALLOP: GPP Phase 2 Trial	Additional clinical data and regulatory strategy update anticipated in Q4 2020
	POPLAR: PPP Phase 2 Trial	Top-line data anticipated in Q1 2021
	EGFRi Mediated Skin Toxicity Phase 2 Trial	Phase 2 trial initiation in Q4 2020
	Ichthyosis Phase 2 Trial	Phase 2 trial initiation in Q4 2020
Etokimab (ANB020, anti-IL-33)	ECLIPSE: Adult Chronic Rhinosinusitis with Nasal Polyps Phase 2 Trial	Complete data by year-end 2020
ANB030 (anti-PD-1 Agonist)	Healthy Volunteer Phase 1 Trial	Top-line data anticipated in mid-2021
ANB032 (anti-BTLA Modulator)	IND Filing	Anticipated Q4 2020

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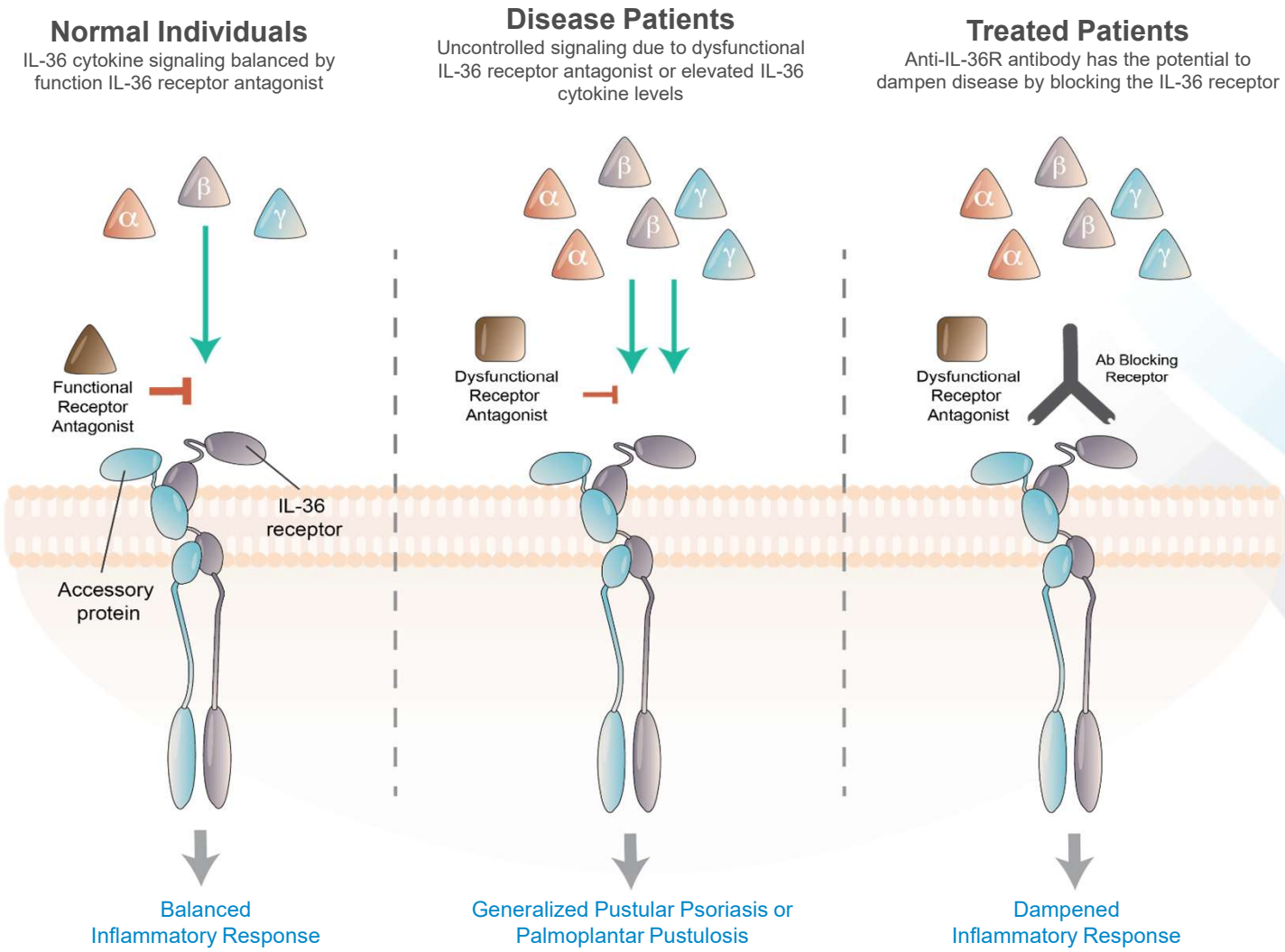
Wholly-Owned Pipeline: Imsidolimab (ANB019, Anti-IL-36R)

Generalized Pustular Psoriasis
Palmoplantar Pustulosis
EGFRi-Mediated Skin Toxicity
Ichthyosis

IL-36 Dysfunction Mediates Severe Inflammatory Disease

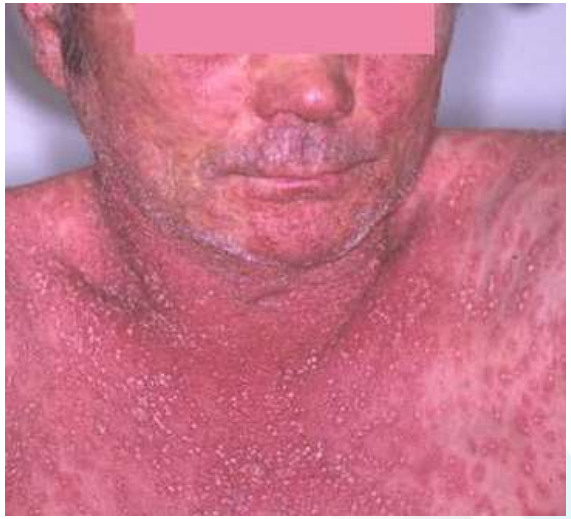
Genetic Association with Generalized Pustular Psoriasis

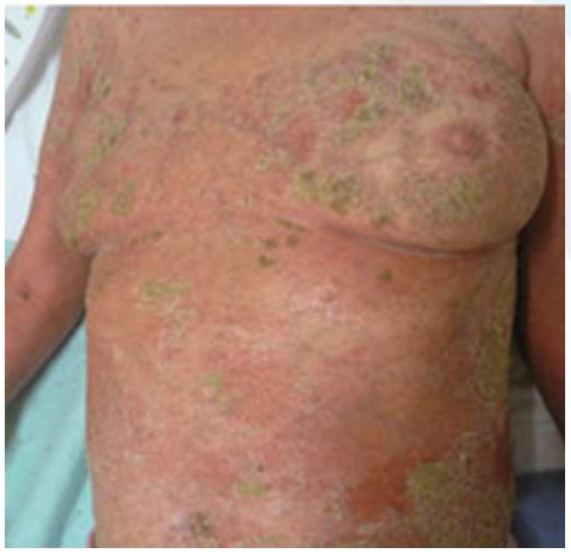


Generalized Pustular Psoriasis (GPP)

Orphan Disease Associated with IL-36 Receptor Antagonist Mutations

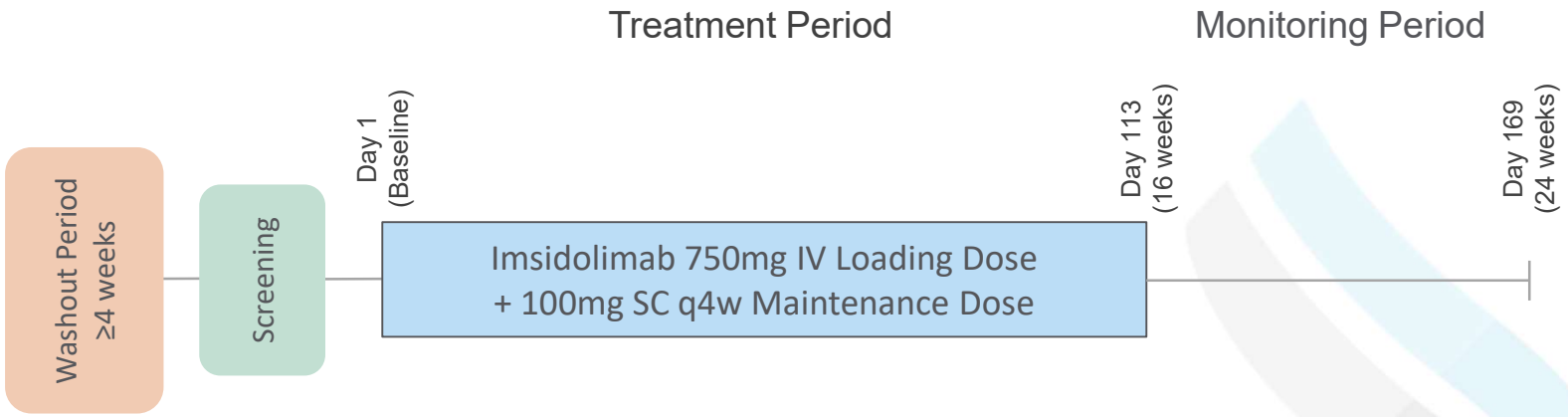
- GPP is a systemic, life-threatening inflammatory disease characterized by widespread pustules
  - Patients have a high fever and elevated levels of serum CRP and inflammatory cytokines (e.g. IL-8)
- Severe GPP patients can die from cardio-pulmonary failure, exhaustion, toxicity and infection
  - No approved therapies for treatment of GPP
- Affects approximately 3,000 patients in the United States
- FDA has granted Orphan Drug Designation to imsidolimab for the treatment of GPP





GALLOP: Imsidolimab Moderate-to-Severe GPP Phase 2 Trial

Trial Design



Patient Population (up to n=10)	• Moderate-to-severe adult generalized pustular psoriasis patients • Baseline mJDA score ≥7, ≥10% body surface area covered by pustules • No concomitant dermatological condition or infection • Washout prior therapy for at least 4 weeks
Key Endpoints	• Primary: Improvement in modified Japanese Dermatology Association (mJDA) index based upon Clinical Global Impression (CGI) scale at Day 28 and Day 113 with imsidolimab monotherapy* • Secondary: change in skin pustules, serum C-reactive protein (CRP) levels

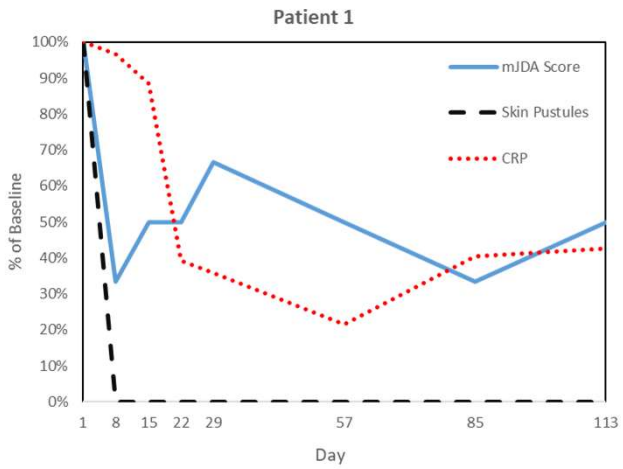
ClinicalTrials.gov: NCT03619902

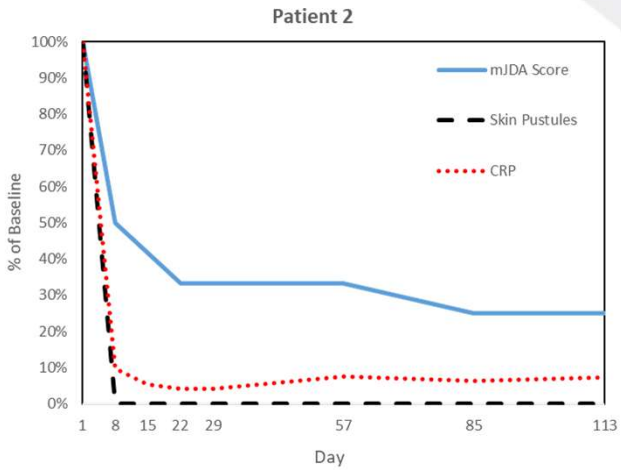
* Rescue therapy available if no improvement by Day 28, however use of rescue therapy disqualifies patient from achieving primary endpoint

Imsidolimab Monotherapy Resulted in Rapid and Sustained Improvement

Interim Analysis Conducted Using First Two Patients To Complete Day 113

Endpoint	Baseline (average)	Result (average, where applicable)
Primary endpoint		Achieved by both patients
Rescue therapy use		None
mJDA score (combines dermatological and systemic inflammation markers)	9	Reduced by 58% at Day 8 and 63% at Day 113
Skin pustules (dermatological hallmark of GPP)	27%	Complete clearance (100% reduction) from Day 8 through Day 113
CRP (systemic inflammation marker)	34 mg/L	Reduced by 47% at Day 8 and 75% at Day 113
Genotype		Wildtype, unmutated IL36RN, CART14 and AP1S3 alleles
Anti-Drug Antibodies		None detected





Another patient dropped out of the trial due to *Staphylococcal aureus* bacteremia diagnosis on Day 3 post-imsidolimab dosing, which was deemed a possibly drug related SAE. AnaptysBio believes this event is unlikely to be drug related due to prior patient history and symptoms of infection prior to imsidolimab dosing.

Interim Analysis Summary

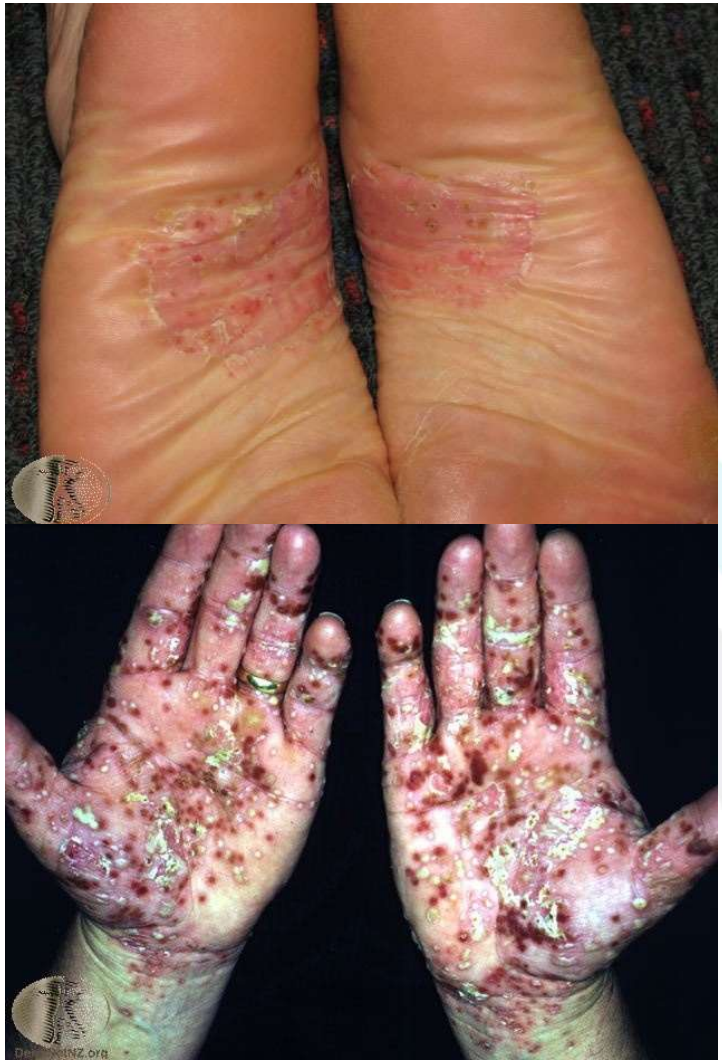
Anticipate Additional Clinical Data and Regulatory Strategy Update in Q4 2020

- Both patients achieved the primary endpoint of disease score improvement at Day 29 and Day 113 without requiring rescue therapy
  - Patients demonstrated rapid and sustained mJDA score improvement, with reduction of 58% at Day 8 and 63% at Day 113
  - Complete clearance of pustules was achieved by Day 8 and through Day 113, while CRP decreased to nearly normal levels in both patients
- Imsidolimab was generally well-tolerated by both patients included in interim analysis
  - No serious or severe adverse events were reported
- Based upon results of interim analysis, enhancing enrollment with:
  - Increased clinical sites and geographies
  - Curtailed washout period requirement for enrollment

Palmoplantar Pustulosis (PPP)

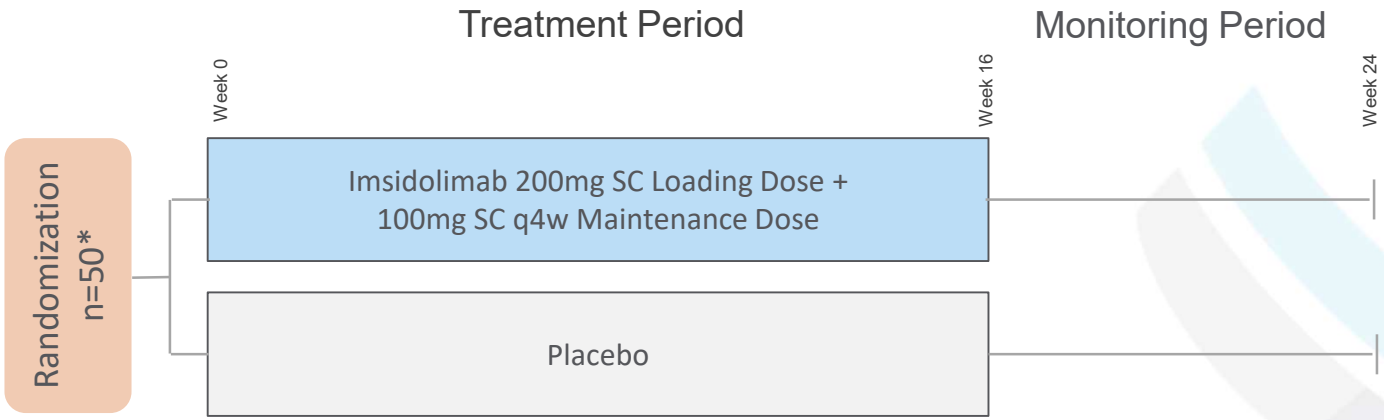
Orphan Disease Associated With Elevated IL-36 Cytokine Levels

- Severe inflammation of hands and feet
  - Significant pain and inability to stand, walk or work
- No approved therapeutic options in this indication
- PPP is an orphan disease that affects approximately 150,000 patients in the United States



POPLAR: Imsidolimab Palmoplantar Pustulosis Phase 2 Trial

Top-Line Data Anticipated Q1 2021



Patient Population	Adult Moderate-to-Severe Palmoplantar Pustulosis
Key Endpoints Week 16	PPPASI Score Improvement Safety

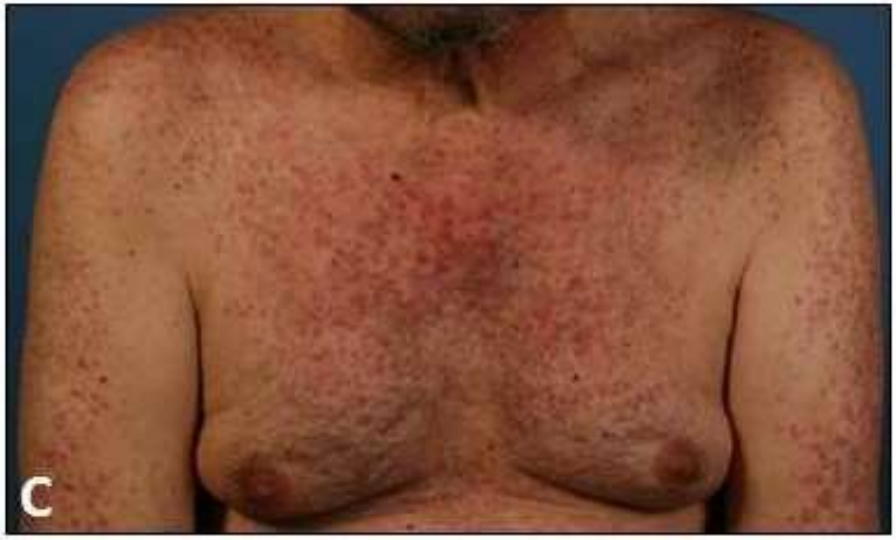
ClinicalTrials.gov: NCT03633396

* Enhancing enrollment with increased clinical sites and geographies

New Indication: EGFRi-Mediated Skin Toxicity

Translational Data Suggests IL-36 Signaling Drives EGFR/MEK Inhibitor Papulopustular Rash

- Papulopustular rash is the most frequent clinically significant dermatological toxicity associated with EGFR/MEK inhibitor solid tumor treatment
- Majority of patients experience dose-limiting skin toxicity and/or discontinuation of EGFR/MEK inhibitor therapy
- Recent human translational data indicates elevated IL-36 signaling is the key driver for this skin toxicity
  - Associated with IL-8 release and neutrophilia
- Approximately 60,000 patients are treated annually with EGFR/MEK inhibitors
- Anticipate initiating Phase 2 trial of imsidolimab for the treatment of EGFRi-mediated skin toxicity in Q4 2020

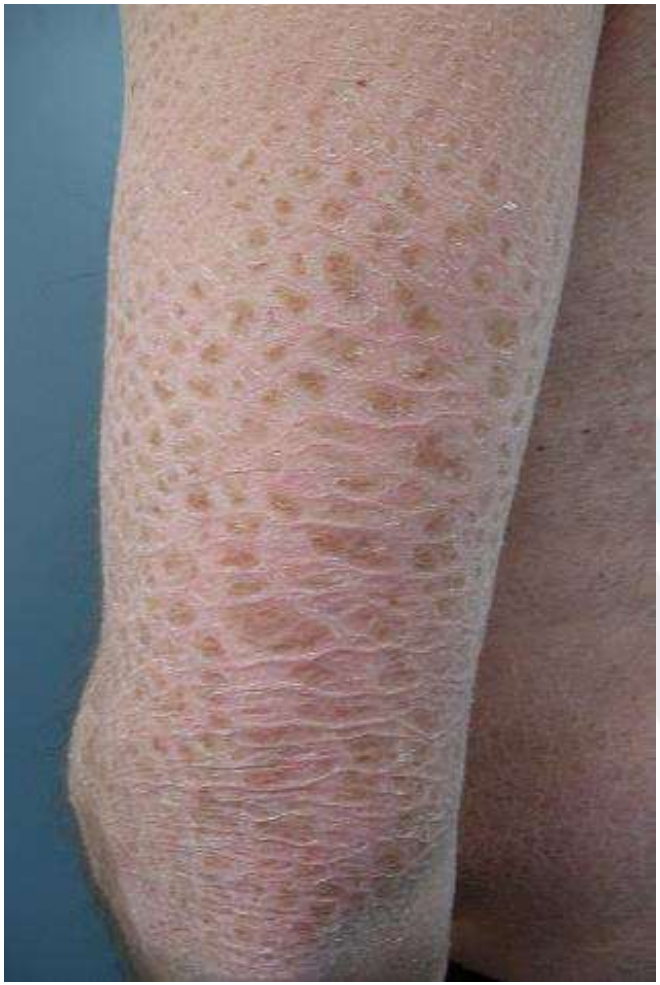


Gerber et al. Eur J Med Res. 2012; 17(1):4

New Indication: Ichthyosis

Orphan Disease Associated With Excess IL-36 Signaling

- Ichthyosis is a rare, orphan dermatological indication with high medical unmet need
- Patients suffer from dry, scaly skin, often leading to itch and painful cracking
- Translational studies have demonstrated high IL-36 cytokine expression levels in patient skin biopsies
- Approximately 6,000 adults diagnosed with moderate-to-severe ichthyosis in the United States
- Initiation of imsidolimab Phase 2 trial in ichthyosis anticipated in Q4 2020



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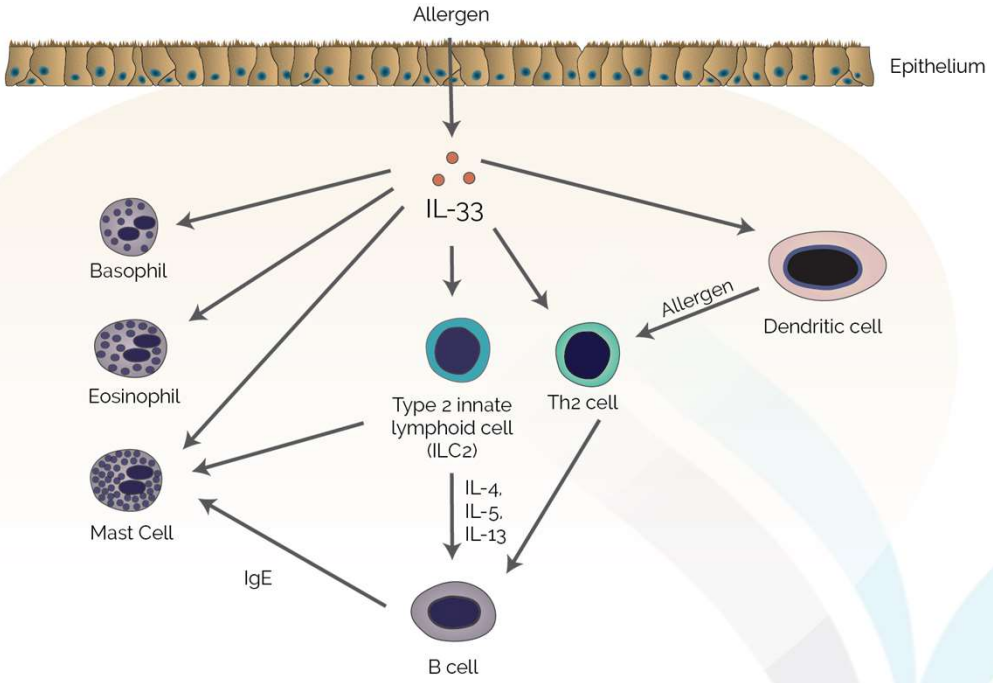
Wholly-Owned Pipeline: Etokimab (ANB020, Anti-IL-33)

Chronic Rhinosinusitis with Nasal Polyps
Moderate-to-Severe Eosinophilic Asthma

Etokimab: First-in-Class Anti-IL-33 Antibody

Development Focused on Respiratory Indications

- IL-33 is genetically associated with asthma
  - IL-33 pathway loss-of-function mutations protect against asthma, while gain-of-function mutations increase asthma incidence
  - Translational studies have demonstrated IL-33's role as pro-inflammatory cytokine released upon allergen contact with epithelium
- Etokimab is a potentially first-in-class anti-IL-33 cytokine antibody
  - Etokimab development focused on respiratory indications, including chronic rhinosinusitis with nasal polyps and moderate-to-severe eosinophilic asthma
  - Estimate 400,000 adults diagnosed with chronic rhinosinusitis with nasal polyps, and 1.1 million adults diagnosed with severe asthma, are inadequately controlled by standard of care in the US

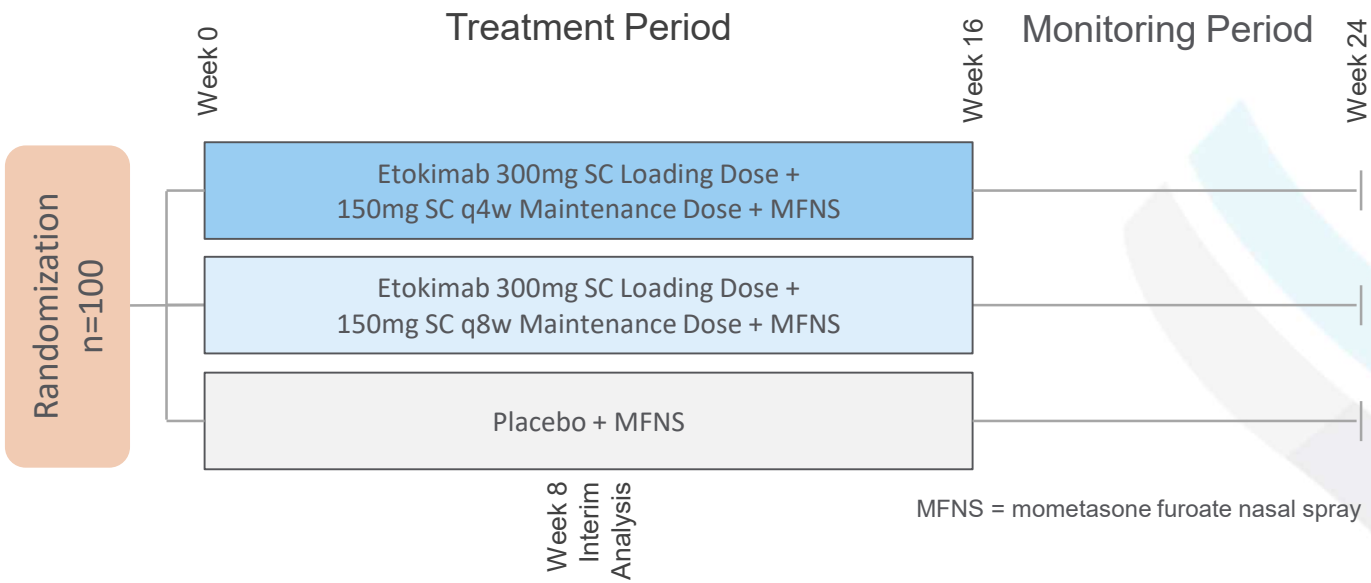


IL-33 is believed to act as a gatekeeper of allergic response with demonstrated activity in the initiation (activation of ILC2 cells)[1], propagation (activation of allergen-specific T and B cells)[2] and amplification (degranulation of mast cells and basophils)[3].

1. Cayrol et al. *Curr Opin Immunol* (2014) 31:31
2. Peine et al. Trends Immunol (2016) 37(5):321
3. Saluja *et al. Clin Transl Allergy (2015) 5:33*

ECLIPSE: Etokimab CRSwNP Phase 2 Trial

Complete Data Anticipated by Year-End 2020



Patient Population	Adult Chronic Rhinosinusitis with Nasal Polyps Baseline NPS≥4 and SNOT-22>16
Key Endpoints	Primary: change in NPS and SNOT-22 relative to baseline at week 16 Secondary: FEV1, ACQ and blood eosinophil in asthma subsets

ClinicalTrials.gov: NCT03614923

ECLIPSE: Etokimab CRSwNP Phase 2 Trial

Interim Analysis Data Announced August 10th 2020

- Etokimab q4w and q8w treatment arms failed to achieve NPS and SNOT-22 statistical significance over placebo at this week 8 interim analysis
  - Both arms demonstrated statistical significance over baseline
- Secondary analyses demonstrated NPS and blood eosinophil level improvement in both asthma and non-asthma comorbid patients versus placebo in each etokimab-dosed arm, while ACQ-5 scores were improved in the asthmatic subset
- Blood eosinophil reduction achieved statistical significance over baseline in both etokimab treatment arms
- Etokimab was generally well-tolerated and demonstrated an acceptable safety profile
- AnaptysBio to assess path forward for the etokimab program after reviewing week 16 primary endpoint data by year-end 2020

Endpoint	Parameter	Etokimab q4w (n=35)	Etokimab q8w (n=35)	Placebo (n=35)
NPS	Baseline	5.4	5.2	5.7
	Week 8	-10%	-11%	-4%
	p-value vs placebo	0.3348	0.3042	N/A
	p-value vs baseline	0.0286	0.0243	0.4288
SNOT-22	Baseline	51.4	53.9	56.9
	Week 8	-23%	-23%	-19%
	p-value vs placebo	0.9927	0.9275	N/A
	p-value vs baseline	<0.0001	<0.0001	<0.001
Blood Eosinophils (cells/ microliter)	Baseline	440	350	430
	Week 8	-23%	-23%	7%
	p-value vs baseline	0.004	<0.001	0.358

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Wholly-Owned Pipeline:
Anti-PD-1 Agonist (ANB030)
Anti-BTLA Modulator (ANB032)

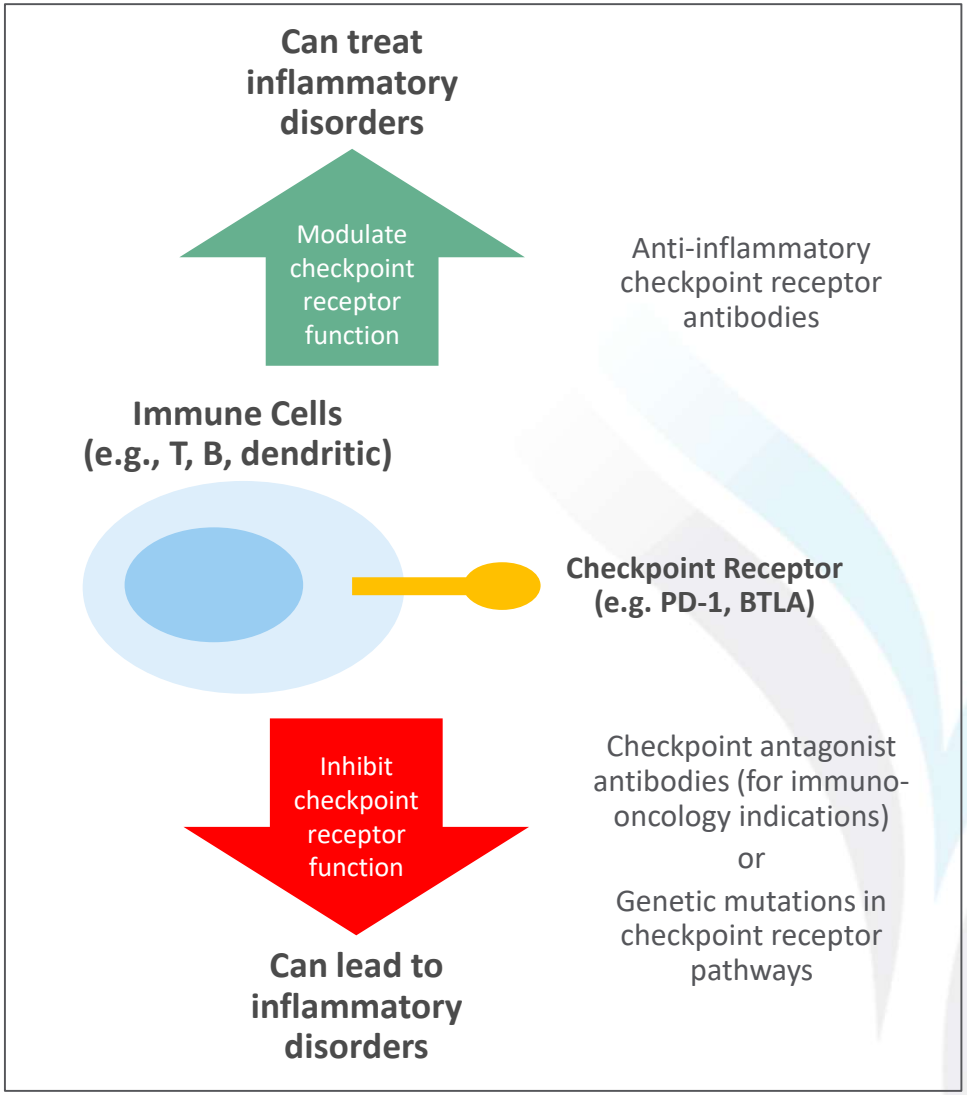
Inflammatory Diseases

Anti-Inflammatory Checkpoint Receptor Antibodies

Novel Therapeutic Class Validated By Human Genetics

Anti-inflammatory checkpoint receptor antibodies have unique binding properties that are challenging to generate using traditional antibody technologies

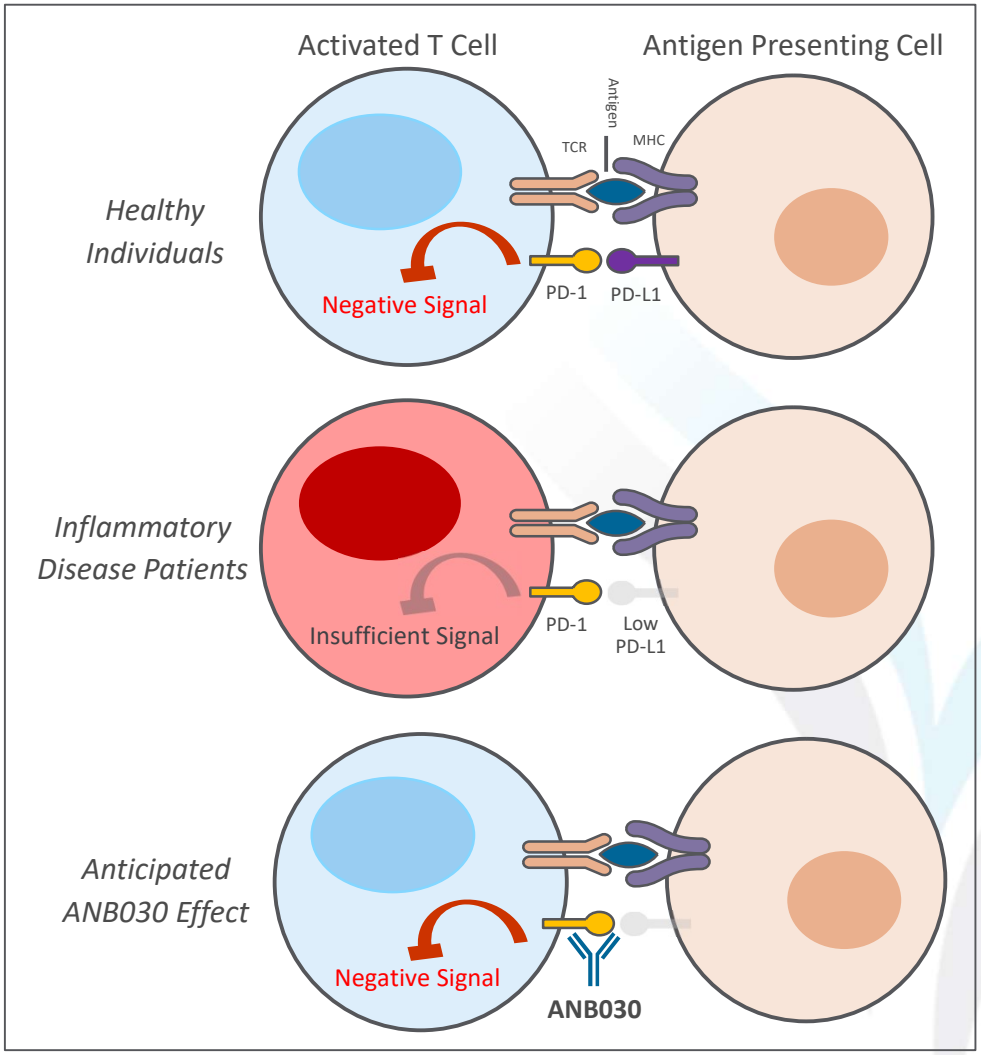
AnaptysBio's technology platform has successfully discovered a portfolio of anti-inflammatory checkpoint receptor antibodies, which are advancing to clinical trials



ANB030: PD-1 Agonist Antibody

Novel Anti-Inflammatory Mechanism Applicable to T-Cell Driven Inflammatory Conditions

- PD-1 is a key inhibitory immune checkpoint receptor responsible for down-regulating T-cell mediated immune responses
- Insufficient PD-1 activity is associated with human inflammatory diseases
  - Genetic mutations in the PD-1 pathway can increase susceptibility to various inflammatory conditions*
- We hypothesize that augmenting PD-1 signaling through ANB030 treatment has the potential to suppress T-cell driven human inflammatory diseases
  - Designed to down-regulate autoreactive T cells by mimicking the function of PD-L1
- Preclinical translational data presented in March 2020
- Healthy volunteer Phase 1 trial ongoing
  - Anticipate top-line data in mid-2021

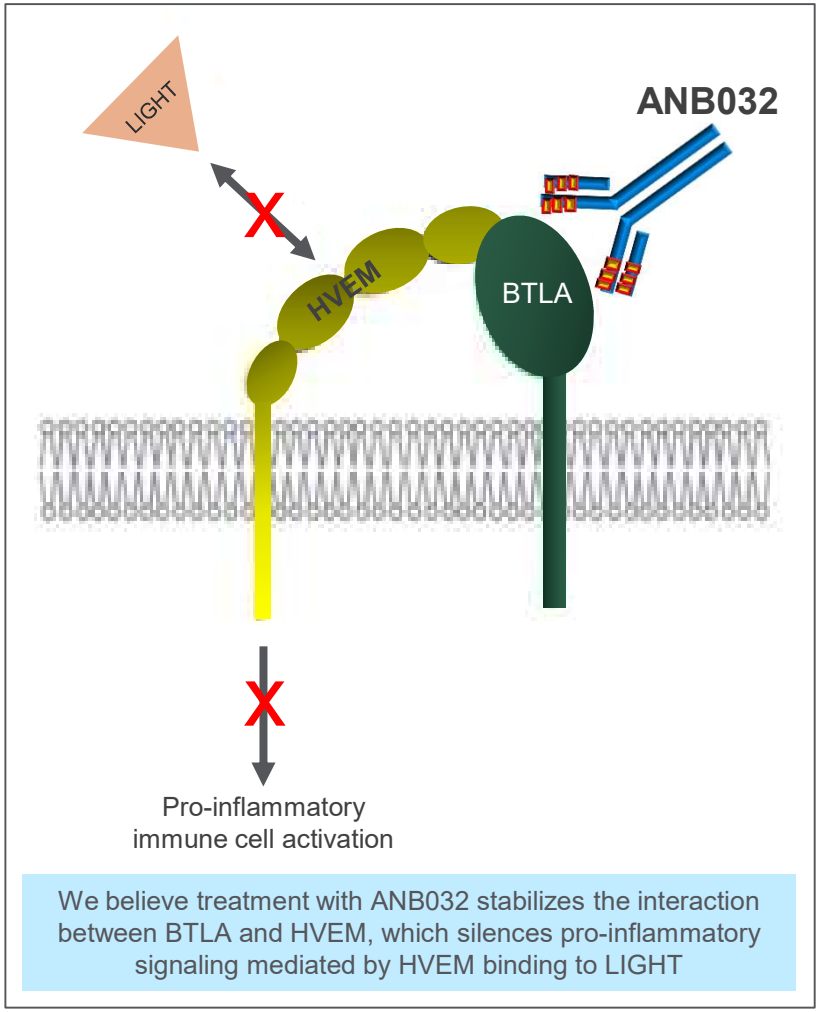


* Okazaki and Honjo. Intern Immunol. 2007

ANB032: BTLA Modulator Antibody

Emerging Lymphoid and Myeloid Immune Control Mechanism Broadly Applicable to Inflammatory Disease

- BTLA is an inhibitory checkpoint receptor responsible for regulating activation of lymphoid (T and B) cells and myeloid (dendritic) cells
- Genetic defects in the BTLA pathway are associated with enhanced susceptibility to inflammatory diseases*
- ANB032 is an anti-inflammatory antibody targeting the BTLA pathway
  - Anticipate ANB032 may be broadly applicable to inflammatory disease due to breadth of BTLA expression across immune cell types
  - ANB032 has demonstrated robust *in vivo* efficacy in animal models of GVHD
- ANB032 IND filing anticipated in Q4 2020



We believe treatment with ANB032 stabilizes the interaction between BTLA and HVEM, which silences pro-inflammatory signaling mediated by HVEM binding to LIGHT

* Lin et al. J Biomed Sci. 2006

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Partnered Pipeline:
GSK Immuno-Oncology Collaboration

Dostarlimab (GSK4057190, anti-PD-1 Antagonist)
Cobolimab (GSK4069889, anti-TIM-3 Antagonist)
TSR-033 (GSK4074386, anti-LAG-3 Antagonist)

GSK Immuno-Oncology Collaboration

Dostarlimab Approaching US Regulatory Approval

	Phase 2	Phase 3
dMMR Endometrial	*BLA and MAA Accepted US Approval Anticipated in H2 2020*	GARNET (n=125) RUBY (n=470)
dMMR Pan-Tumor	*Regulatory Filing Anticipated H1 2021*	GARNET (n=125)
Colorectal		GARNET (n=48)
		FIRST (n=912)
Ovarian	MOONSTONE (n=150) OPAL (n=41)	
NSCLC	JASPER (n=142)	
Cervical	ATOMICC (n=132)* STAR (n=66)*	
Liver	n=42*	
Rectal	n=30*	
Melanoma	n=56*	
Sarcoma, Clear Cell	n=16*	
HNSCC	n=23*	
All-Comer/ Undisclosed	AMBER (n=873) CITRINO (n=200)	

Aggregate Financial Terms

- $1.1B in aggregate milestone payments
  - $432MM in potential development & regulatory milestones
  - $660MM in potential commercial milestones
- 4-8% royalty upon global sales

Dostarlimab Regulatory Filing and Approval Milestones

$15MM Received of $90MM Total

- ✓ dMMR Endometrial: 10MM upon 1st FDA BLA Acceptance (Received H1 2020)
- ✓ dMMR Endometrial: $5MM upon 1st MAA acceptance by EMA (Received H1 2020)
- dMMR Endometrial: $20MM upon 1st US Regulatory Approval (Anticipated In H2 2020)
- dMMR Endometrial: $10MM upon 1st EU Regulatory Approval
- dMMR Pan-Tumor: 10MM upon 2nd FDA BLA Acceptance
- dMMR Pan-Tumor: $5MM upon 2nd MAA acceptance by EMA
- dMMR Pan-Tumor: $20MM upon 2nd US Regulatory Approval
- dMMR Pan-Tumor: $10MM upon 2nd EU Regulatory Approval

* Investigator sponsored trial
dMMR = mismatch repair deficient

Dostarlimab (anti-PD-1 Antagonist)

Dostarlimab + Cobolimab (anti-TIM-3 Antagonist)

Dostarlimab + TSR-033 (anti-LAG-3 Antagonist)

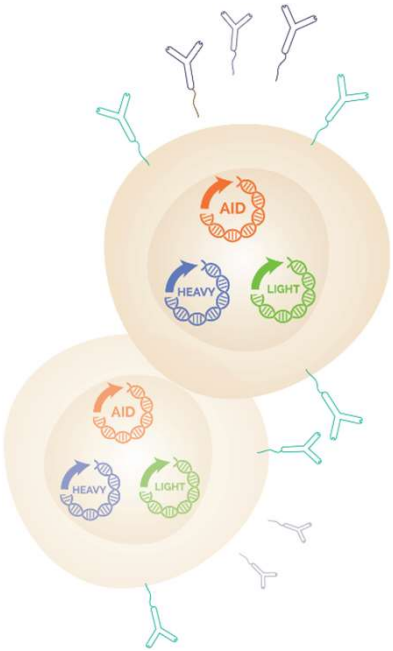
AnaptysBio

Proprietary Technology Platform

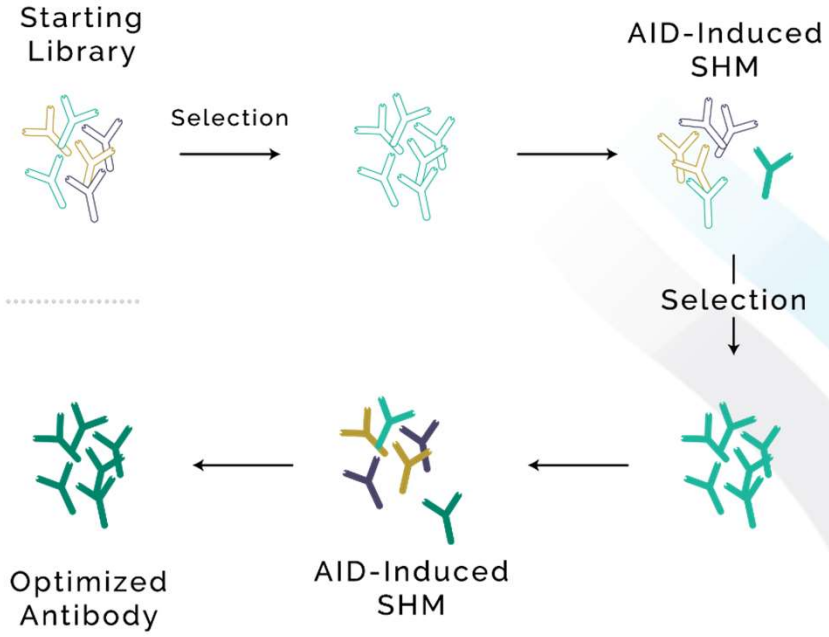
Somatic Hypermutation (SHM) Platform

Proprietary Platform Incorporates in vitro SHM and Iterative Antibody Evolution

***In Vitro* SHM**



Iterative Antibody Evolution



In vitro SHM permits access to biological targets that have been difficult to address with prior antibody technologies

Somatic Hypermutation (SHM) Platform

Advantages Over Competing Antibody Technologies

- Unprecedented antibody diversity through SHM
  - *In situ* antibody diversity generation outside of the constraints of an *in vivo* environment
- High potency & functional activity
  - Only small doses may be required to convey therapeutic effect *in vivo*
- Reliable manufacturability
  - Increased probability of successful clinical and commercial manufacturing
- Speed: ~2.5 years from novel target to IND (or equivalent) filing
  - Enables rapid development of potentially first-in-class therapeutic antibodies to emerging target biology

7 AnaptysBio-generated antibodies have advanced to clinical development since 2016

AnaptysBio

Summary

Anticipated Wholly-Owned Pipeline Catalysts

Program	Clinical Catalyst	Anticipated Timing
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Advancing First-In-Class Immunology Therapeutics to Patients

Multiple Clinical Catalysts	Upcoming catalysts include GPP and PPP Phase 2 data (imsidolimab), EGFRi-mediated skin toxicity and ichthyosis Phase 2 initiation (imsidolimab), Phase 1 clinical data (ANB030) and new IND filing (ANB032)
Validated Platform	Rapid antibody R&D engine has advanced 7 internally-generated antibodies to clinical development since 2016
Novel Immunology Pipeline	Focused on first-in-class inflammation and immuno-oncology mechanisms, advancing 1 new program to IND each year
Accelerating Partnership Revenues	Approximately $100MM in partnership revenues received to date, additional $20MM milestone and royalties anticipated following dostarlimab US BLA approval in H2 2020
Capital Efficient Business Model	Cash and existing partnerships anticipated to extend runway into 2023, $392MM in cash (end Q2 2020) with projected 2020 net burn of ~$60MM


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