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Corporate Presentation

July 2016

Forward-Looking Statements

This presentation contains “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995 regarding, among other things, clinical development plans, anticipated milestones, product candidate benefits, potential market size, product adoption, market positioning, competitive strengths, product development, and other clinical, business and financial matters. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate or known or unknown risks or uncertainties materialize, actual results could vary materially. Risks and uncertainties include, but are not limited to, our limited operating history, our need for additional financing to achieve our goals, our dependence on our lead product AR101, the need for additional clinical testing of AR101, uncertainties relating to the regulatory process, uncertainties relating to the timing and operation of clinical trials, potential safety issues, possible lack of market acceptance of our product candidates, the intense competition in the biopharmaceutical industry, our dependence on exclusive third-party suppliers and manufacturers, and limitations on intellectual property protection. A further list and description of these risks, uncertainties and other factors can be found in our report on Form 10-Q filed on May 16, 2016. Copies of this filing are available online at www.sec.gov or www.aimmune.com. Any forward-looking statements made in this presentation speak only as of the date of the presentation. We do not undertake to update any forward-looking statements as a result of new information or future events or developments.

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Aimmune Investment Highlights (Nasdaq: AIMT)

Oral biologic treatment (AR101) for peanut allergy in Phase 3

- > 6 million peanut-allergic patients (U.S./EU); life-threatening, no approved treatments
- Robust Phase 2 and 2b efficacy and safety data, ~80% ITT efficacy in just 6 months
- Breakthrough and Fast Track Designation; approved PIP in Europe
- Pivotal Phase 3 ongoing, ~ 500 patients ages 4-55 globally
- Targeting pivotal data in 2H 2017 and BLA filing in 2018

Proprietary CODIT™ platform applicable to other severe allergies

- **C**haracterized **O**ral **D**esensitization **I**mmuno**T**herapy
- Biologic drug products with standardized protocols, physician/patient support services
- AR101 is the first application of CODIT; pipeline in early development

Capital and Experience to Deliver

- Seasoned team: Leaders with >30 approved NDAs, BLAs and MAAs
- Funded through expected pivotal data (~$187M in cash and investments as of 3/31/16)

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Peanut Allergy Is An Urgent Unmet Need

Peanut protein can be difficult to spot

One accident can be fatal

CBS NEWS | September 24, 2015, 5:23 PM

Colorado teen with peanut allergy dies after eating s'mores

HEALTH & MEDICINE JULY 30, 2013 12:00 AM

Years of caution about peanut allergy fails to save teen who died at Camp Sacramento

Allergic reaction to peanut residue kills 22-year-old Twin Cities man

Days before, Bruce Kelly had eaten candy from the same container with no reaction, his mother said.

By Mary Lynn Smith Star Tribune | JANUARY 22, 2016 — 12:21PM

HEALTH September 21, 2015 4:12 pm Updated: September 21, 2015 9:32 pm

Canadian student dies after ordering smoothie on campus; suffers severe allergic reaction: family

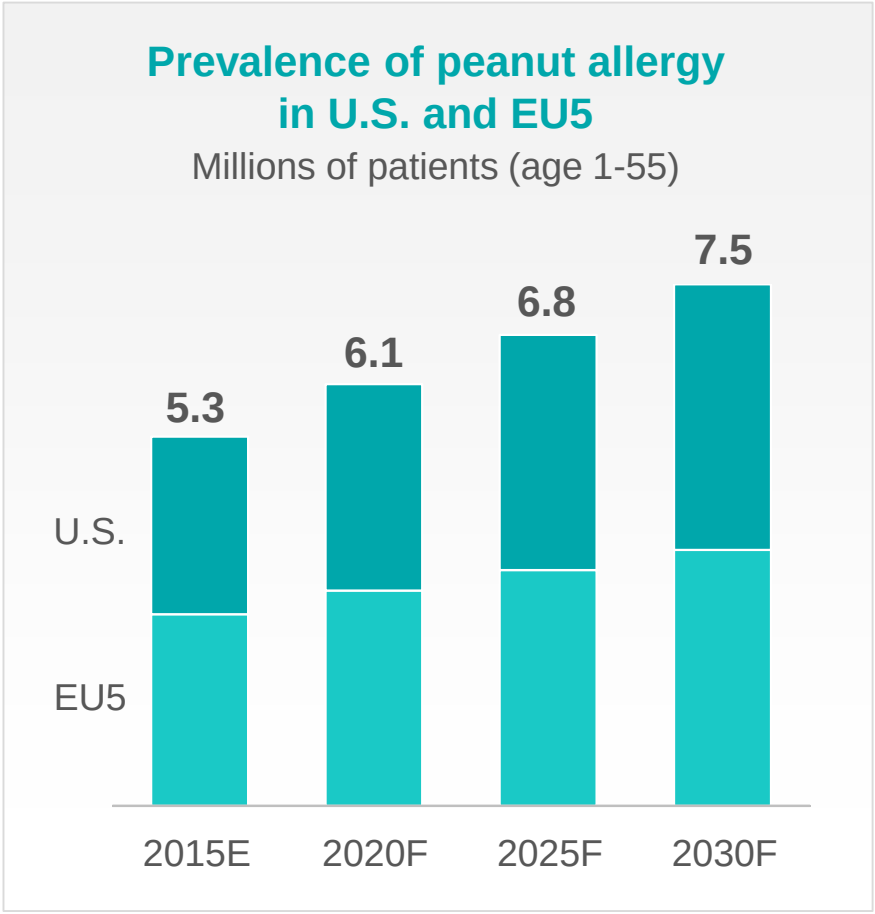
50% of Allergic Patients React to 1/3 of a Peanut Kernel or Less

Sources: Deschildre (2015) MIRABEL study, Allen (2013) VITAL 2.0 study

Peanut Allergy Population Is Large And Growing

Peanut Allergy is…

- **Prevalent:** >6 million patients in the U.S. and EU5
  - Number of peanut allergic children in the U.S. ***tripled*** between 1997-2008, continues to grow
- **Chronic:** Only 20% lifetime chance of resolution
- **Life-Threatening:** ~100 deaths and >100,000 ER visits per year
- **Burdensome:** More Quality of Life impact than Type 1 Diabetes
- **Not Treated:** No approved treatments*

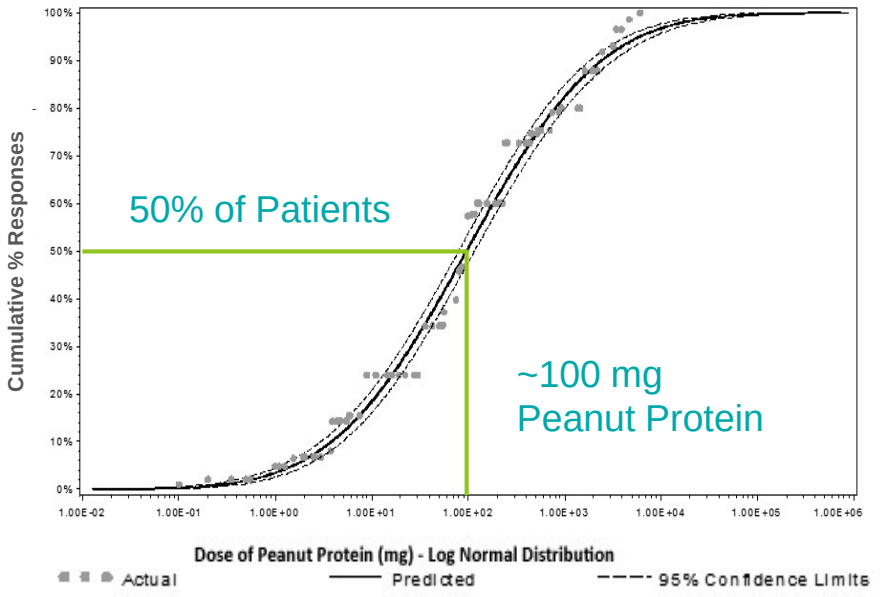


Source: FARE, Gupta (2013), Avery (2003), Cummings (2010), Sicherer (2010), Venter C (2010), Hourihane JO (2007), Nicolaou (2010), World Bank, Euromonitor, Aimmune internal analysis

* Available options are limited to food avoidance, use of antihistamines and rescue therapy (epinephrine injections)

The Diagnosis of Peanut Allergy Encompasses a Wide Range of Sensitivity

About 50% of Patients are Sensitive to Half a Peanut or Less…



*Source: VITAL 2.0 study**

…Often by Only Trace Amounts Found in Everyday Foods

Triggering Amount	% of Patients	Food Equivalent
≤5 mg	~1%	
5-50 mg	~35%	
51-100 mg	~10%	1/3 

- ***A Useful Treatment Should Protect the Most At-Risk Patients***
- ***Patients with Low Thresholds are at Greatest Risk from Accidental Exposure***

Sources: Deschildre (2015) MIRABEL study, Allen (2013) VITAL 2.0 study
* Allergen reference doses for precautionary labeling. Graphic retrieved from Zurzolo (2013)

Oral Immunotherapy (OIT): A Promising Approach to Treat Peanut Allergy

Published History of Safe, Effective Use

- Used for 100+ years in >1,000 peanut allergy patients
- Desensitization with periodically administered oral peanut protein
- Achieves near 100% desensitization in patients who complete therapy
- Favorable tolerability profile – no persistent adverse events

High Demand but No Approved Product

- Current practice guidelines recommend against OIT due to lack of Grade A evidence from rigorously designed, adequately powered trials
- OIT historically used mostly in small academic clinical trials at a few top centers
  - Long waitlists at these centers
  - Families relocating for treatment
- ~6% of surveyed allergists* currently perform OIT with off-the-shelf foods
- 74% of surveyed allergists* waiting to adopt an FDA-approved peanut OIT and protocol

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*Greenhawt MJ, Vickery BP *J Allergy Clin Immunol Pract* (2015)

Aimmune: A Collective Call to Action for an FDA-Approved Oral Immunotherapy (OIT) Product

FDA

FARE
Food Allergy Research & Education

NIH

STANFORD UNIVERSITY

Duke UNIVERSITY

UNIVERSITY OF ARKANSAS

- Aimmune grew out of a 2011 meeting with patient advocates, FDA, NIH, academic leaders, and industry representatives
- All stakeholders called for rigorous pharmaceutical development of an OIT product
- As more people look to do OIT, an approved product is critical

OIT Recognized as a Promising Approach to Deliver Reliable Protection Against Accidental Exposure for Food Allergy Patients

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AR101 Biologic Product Form Factor

Proprietary, pharmaceutical-grade peanut protein formulation containing all allergenic proteins in peanut in a fixed ratio

Peanut Protein Concentration

- Accurate total peanut content (0.5 mg, 1 mg, 10 mg, 20 mg, 100 mg, 300 mg)

Molecular Fingerprint

- Consistent relative amounts of three key allergens (Ara h1, h2, h6)
- All other naturally-occurring protein allergens present

Compliance-enabling Formulation

Low dose, taste-masking and formulation to:

- Streamline supply
- Improve compliance
- Facilitate adoption

74% of surveyed allergists would do OIT if an FDA / EMA approved product were available

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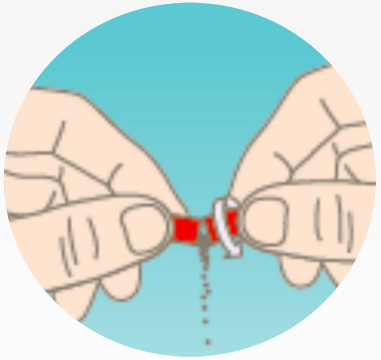
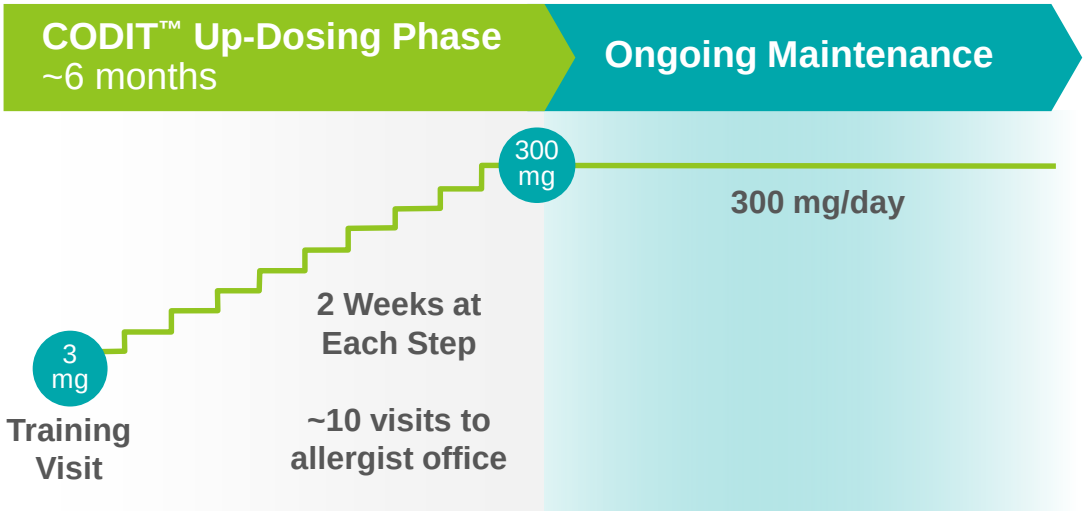
Greenhawt, Vickery (2015)

Proprietary CODIT™ Platform Makes OIT a Practical Reality for Physicians and Patients

CODIT™

(*C*haracterized *O*ral *D*esensitization *I*mmuno-*T*herapy)





- **FDA / EMA Approved Biologic Drug Product**
- **Standardized Protocol** – for all patients
- **Consistent Efficacy and Safety Data**
- **Convenient Packaging** – use at scale
- **Education /Support Services** – for physicians and patients

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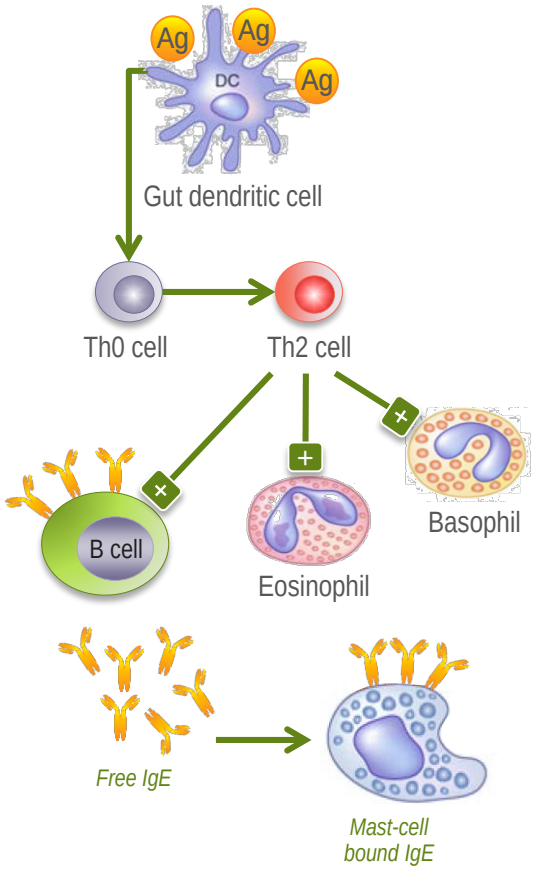
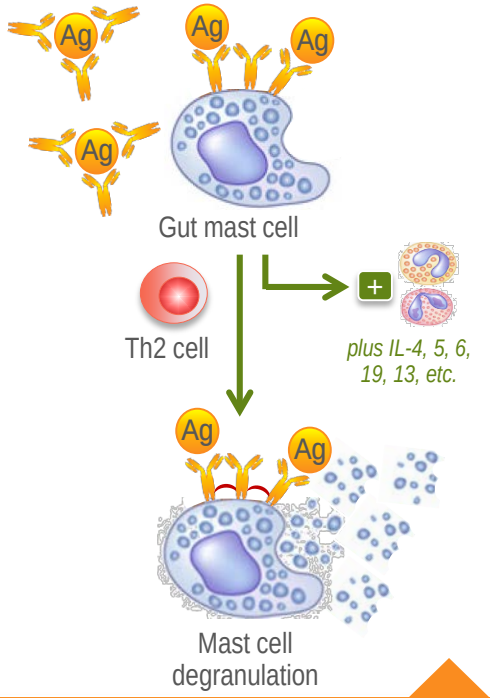
How CODIT™ Works

Food Allergy

Development of allergy

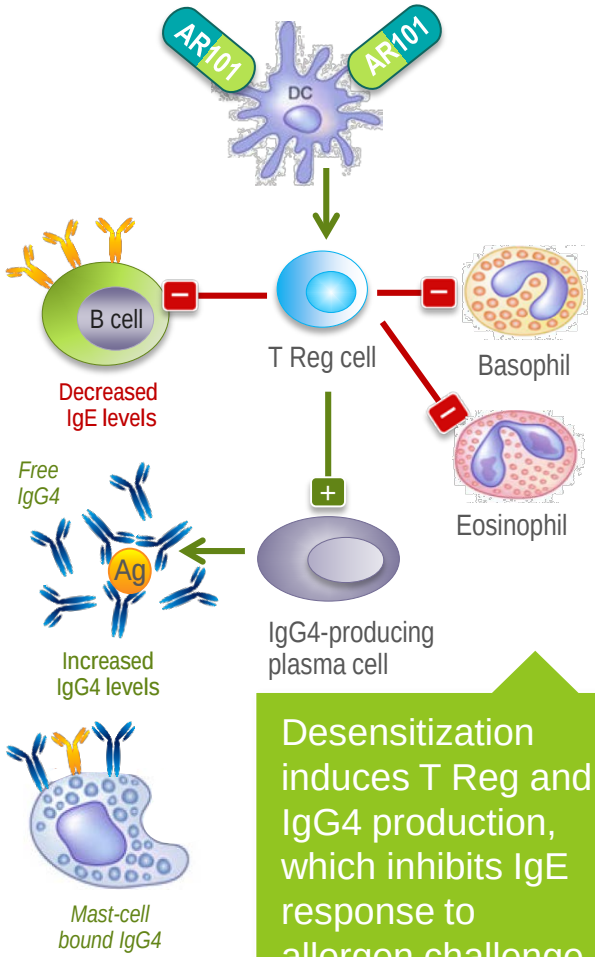


Allergic response to food



Food allergen binds to IgE, triggering massive mast cell degranulation and Th2-mediated inflammatory cascade

Desensitization



Desensitization induces T Reg and IgG4 production, which inhibits IgE response to allergen challenge

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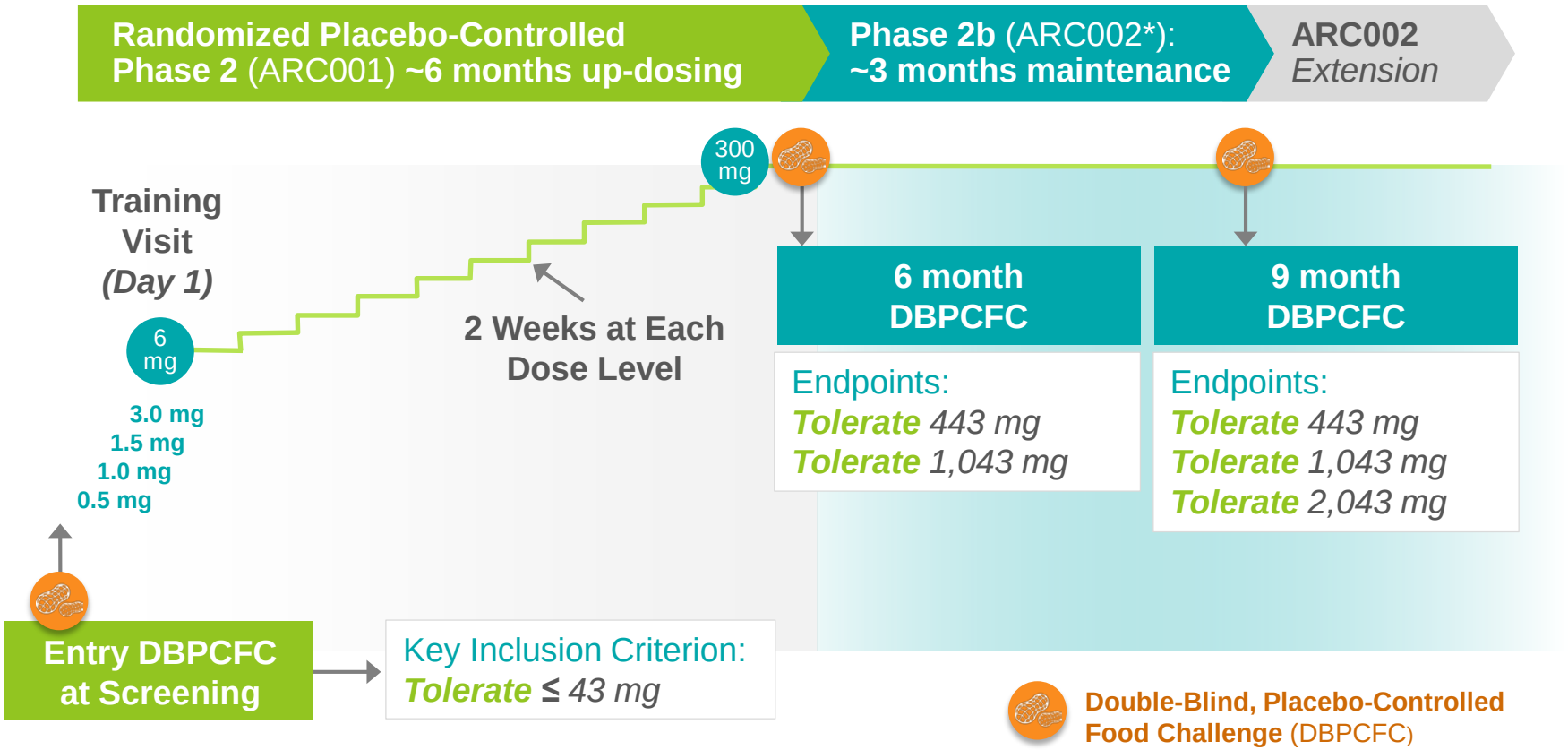
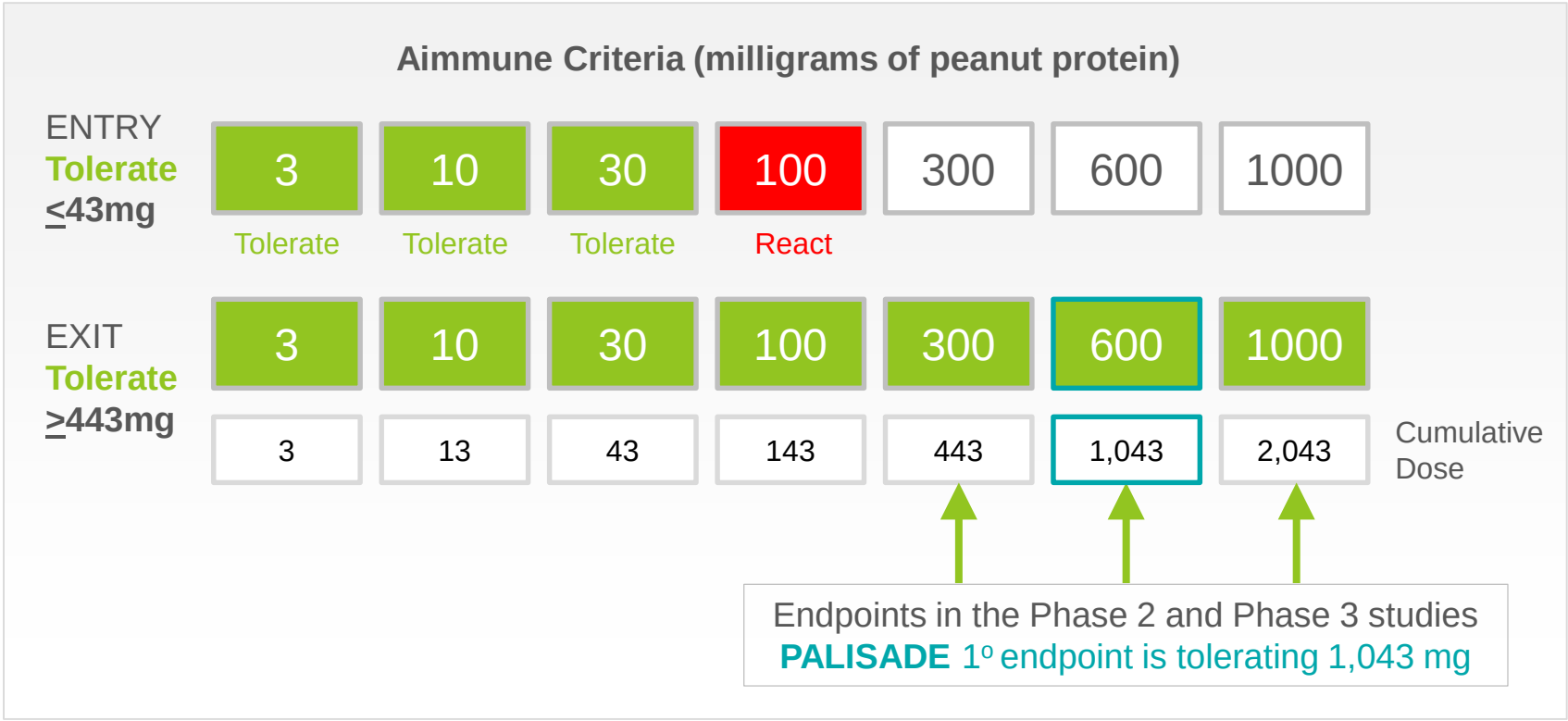
AR101 Phase 2 Trials: Up-Dosing and Maintenance



* In ARC002, Legacy Placebo patients from ARC001 were first up-dosed over 6 months and then continued 3 months of maintenance therapy

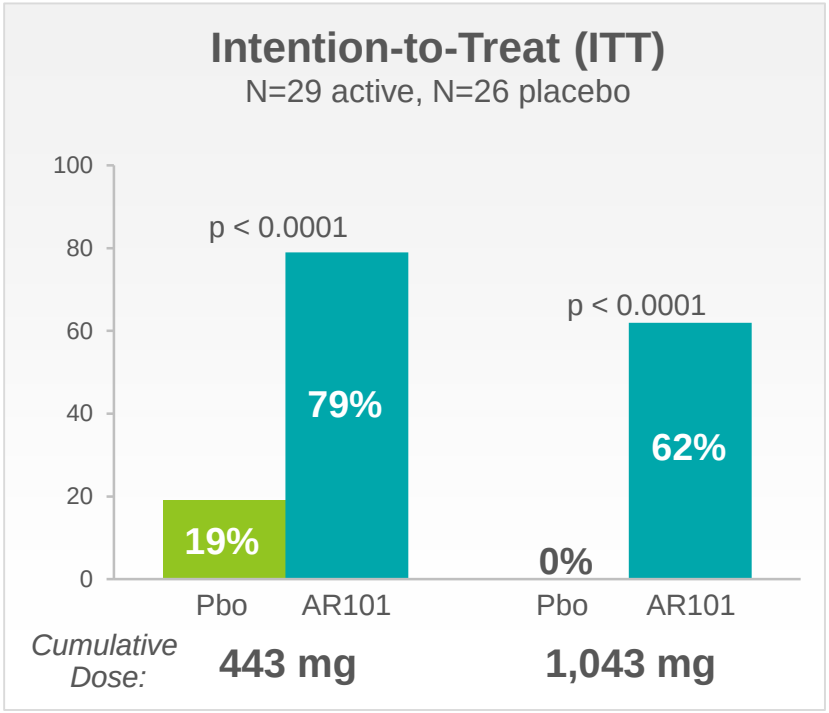
Understanding the Endpoint: DBPCFC and Tolerated Dose

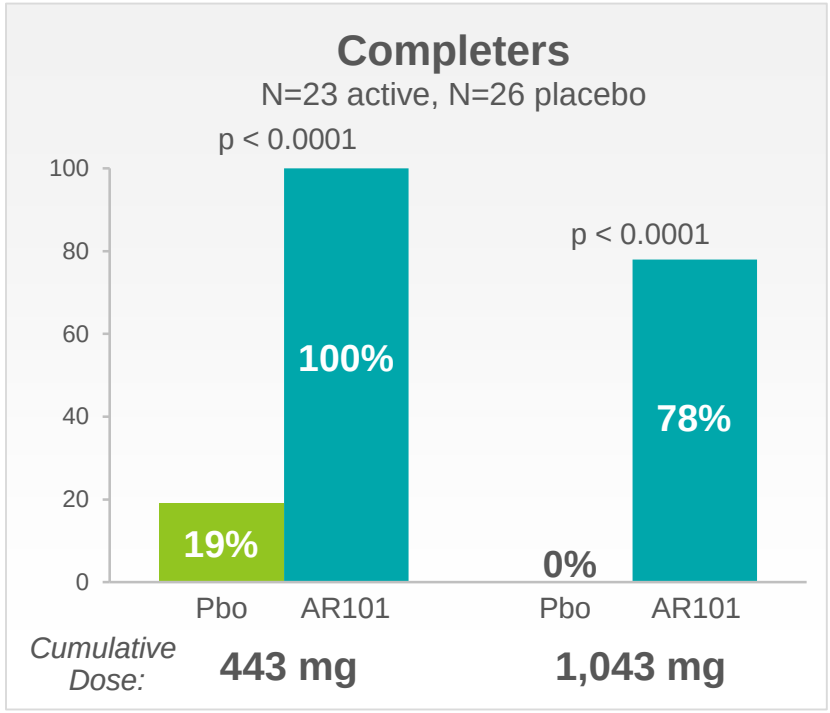
In the DBPCFC patients are given increasing doses of peanut protein every 20-30 minutes to measure their tolerated and reactive level



Randomized Placebo-Controlled Phase 2 Results After 6 Months on AR101 (N=55)

Percent of Subjects Tolerating Dose at 6-Month Exit Food Challenge

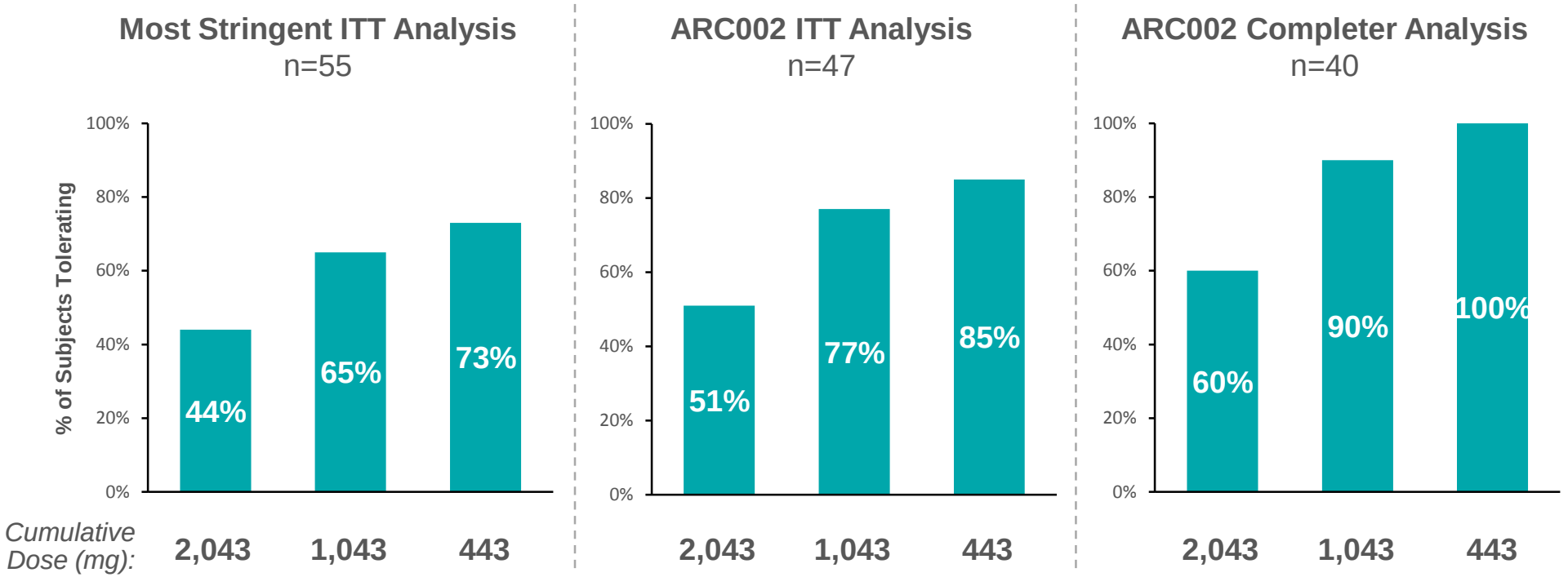




EAACI 2015. Burks, W., et al.

ARC002 Phase 2b Results After 9 Months on AR101

Percent of Subjects Tolerating Dose at 9-Month Exit Food Challenge



Data for all patients – ARC001 legacy active rollovers + legacy placebo crossed to active in ARC002

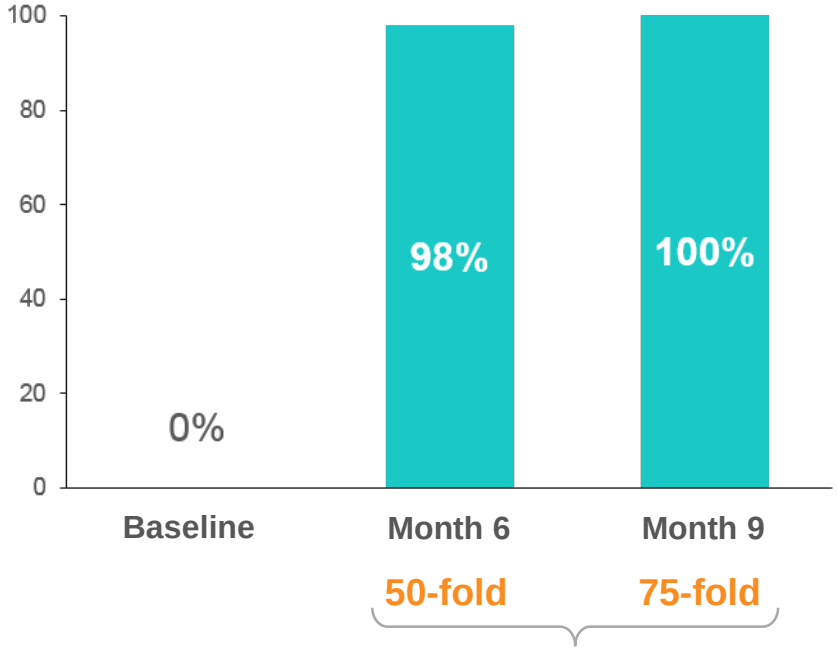
Source: Bird, A., et al., AAAAI 2016
ITT = Intention-to-Treat

Phase 2 Results After 9 Months on AR101

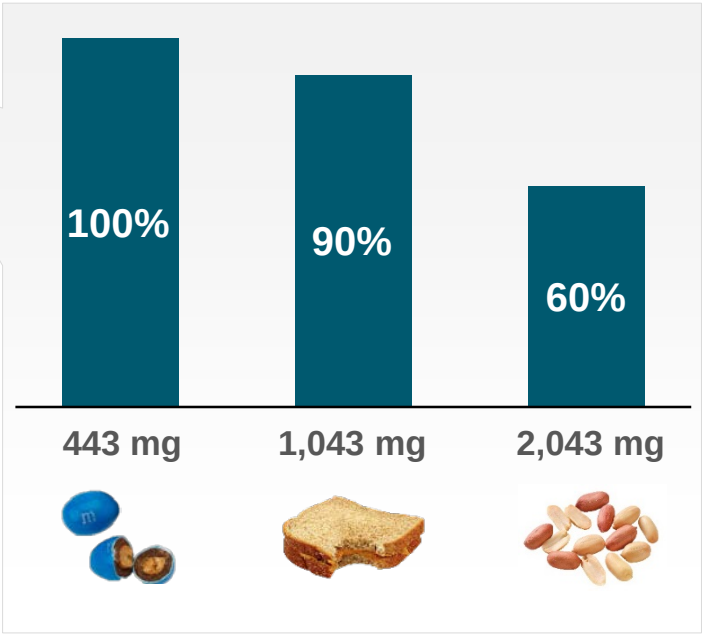
Phase 2 Completer Analysis (N=40)

Protection to 443 mg (1.5 peanuts)

6 month Up-dosing → **3 month Maintenance**



Increase in Tolerated Dose



Protection level at Month 9 against increasing doses of peanut protein

Double-Blind, Placebo-Controlled Food Challenge (DBPCFC)

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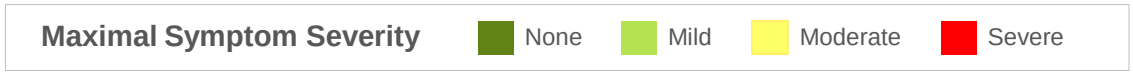
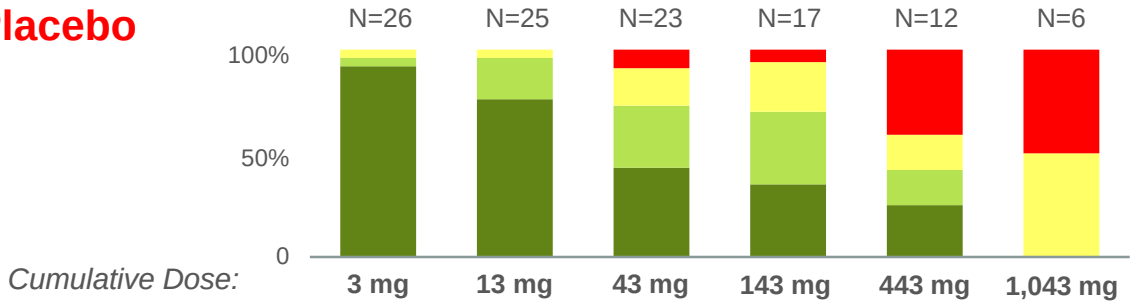
AR101 Prevented and Blunted Reactions at 6 Month Food Challenge

Exit Food Challenge Symptom Severity at 6 Months



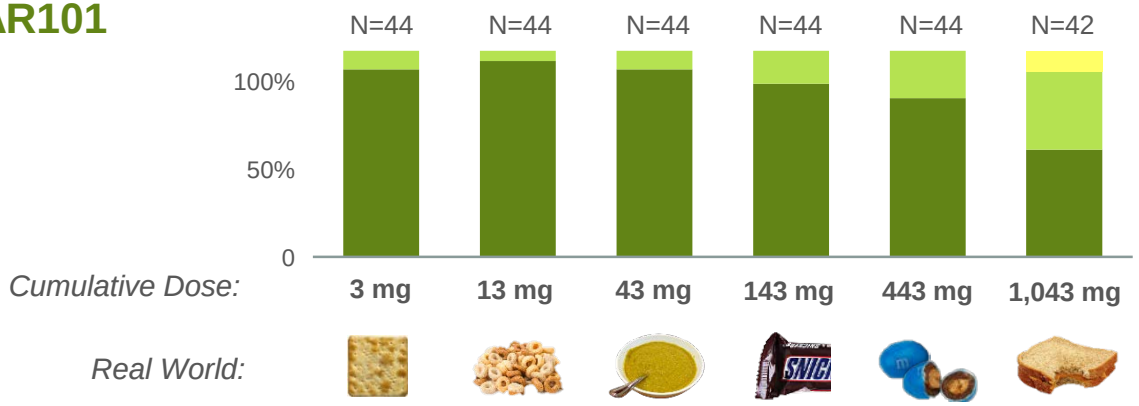
Placebo



Reactions Requiring Epinephrine

Placebo: 11 patients
(3 required 2 injections)

AR101



Reactions Requiring Epinephrine

AR101: 2 patients
(0 required 2 injections)

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Burks W, et al. EAACI 2015; Bird A, et al. AAAAI 2016

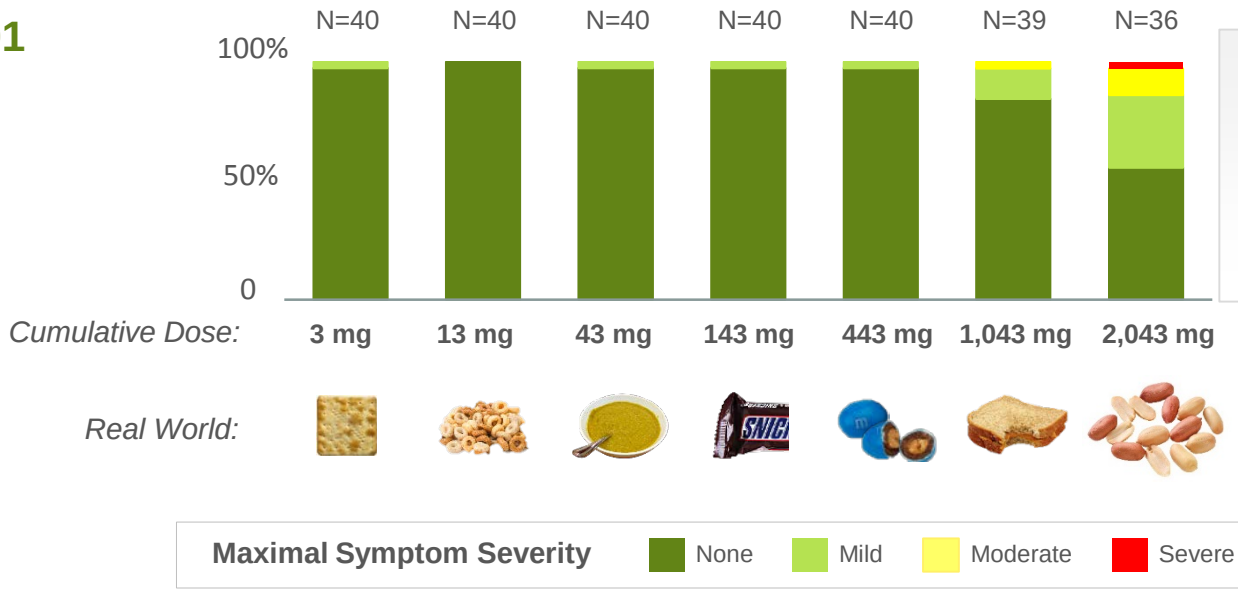
AR101 Further Prevented and Blunted Reactions at 9 Month Food Challenge

Exit Food Challenge Symptom Severity at 9 Months

6 Months Up-dosing + 3 Months Maintenance (300 mg/day)

Placebo Crossovers and Active Rollovers combined (N=40)

AR101



Reactions Requiring Epinephrine

Two subjects required single injections of epinephrine

Burks W, et al. EAACI 2015; Bird A, et al. AAAAI 2016

AR101 Drove >2,000 mg Increase in Median Tolerated Dose in Phase 2

Food Challenge Results (Tolerated Dose)

Median Tolerated Dose in Food Challenge	Group	
	Placebo n=26	**AR101** n=40
Baseline sensitivity (week 0)	28 mg	13 mg
6 months (after up-dosing)	43 mg	1,043 mg
9 months (after maintenance)	n/a	2,043 mg
Increase in Median Tolerated Dose on AR101		**2,030 mg**

Phase 2 Efficacy Supports Phase 3 Primary Endpoint of Tolerating 1,043 mg

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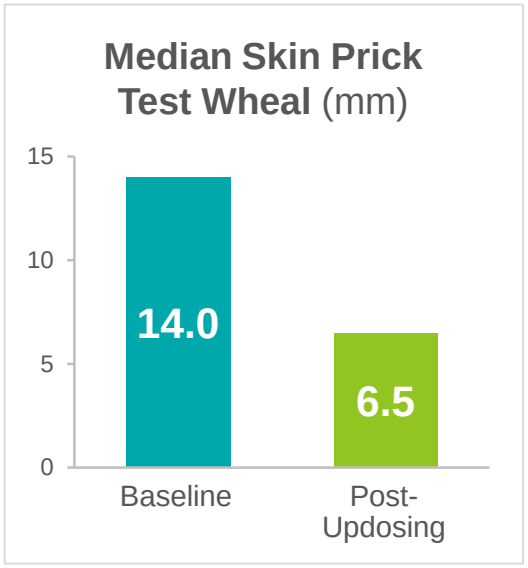
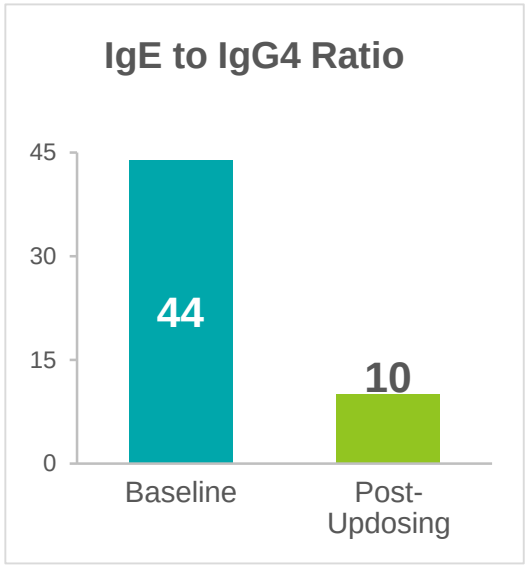
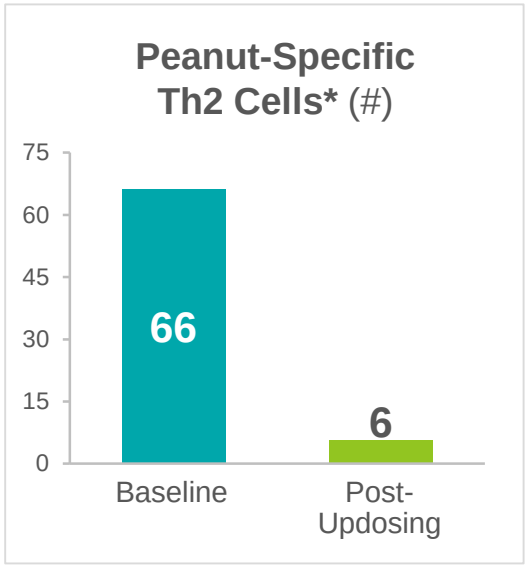
Desensitization Fingerprint: Biomarker Data Supports AR101 Efficacy

AR101 Treatment Leads to Reduction in SPT Wheal Size, IgE/IgG4 Ratio, and Peanut-Specific Th2 Cells







Reduction in These Critical Biomarkers Corresponds with Meaningfully Reduced Sensitivity to Peanut Allergens

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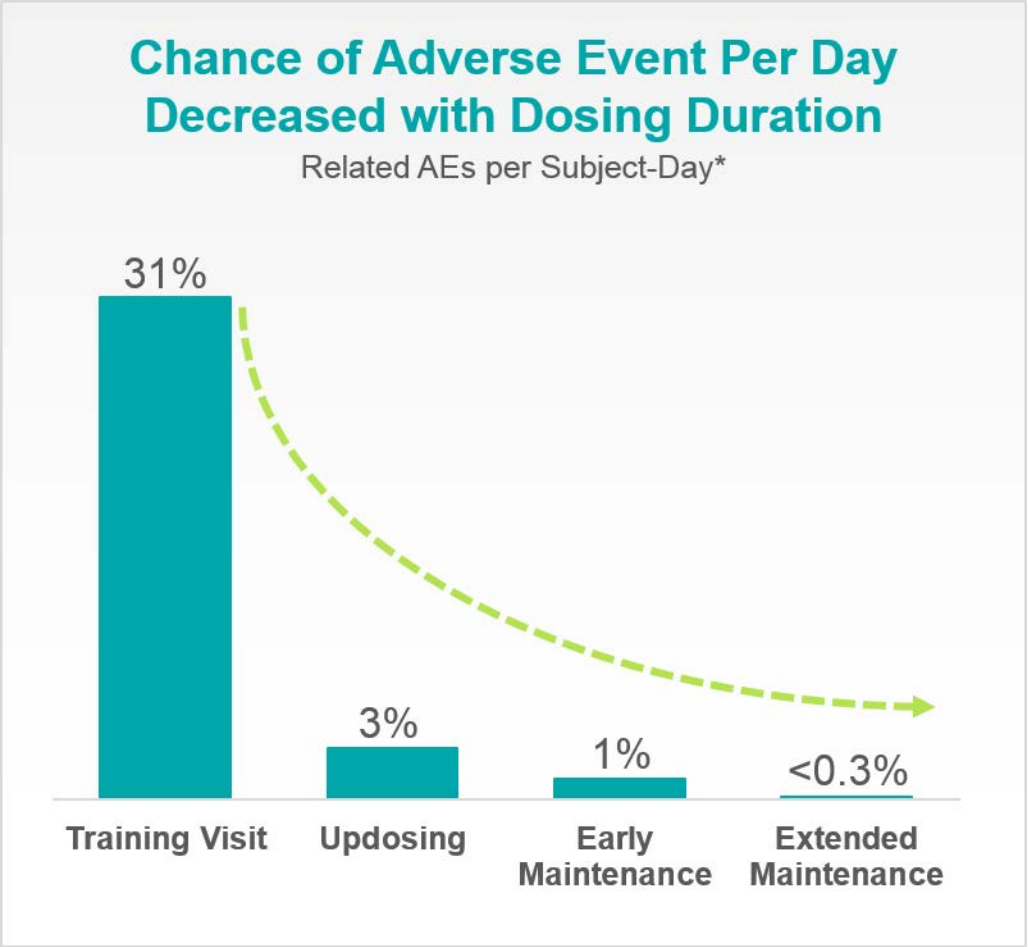
* Peanut-specific Th2 lymphocytes per million CD4+ T lymphocytes; average of data from n=4 patients in active arm

Sources: Wambre E, et al. AAAAI 2016; Bird A, et al. AAAAI 2016

Phase 2 Data Suggest a Mild Adverse Event Profile and Increasing Tolerability Over Time

Largely Mild AE Profile

- >90% AEs mild, rest moderate
- Mainly hypersensitivity (e.g., transient hives, lip pruritus)
- Consistent with exposure to low levels of food allergen
- No severe or life-threatening related AEs



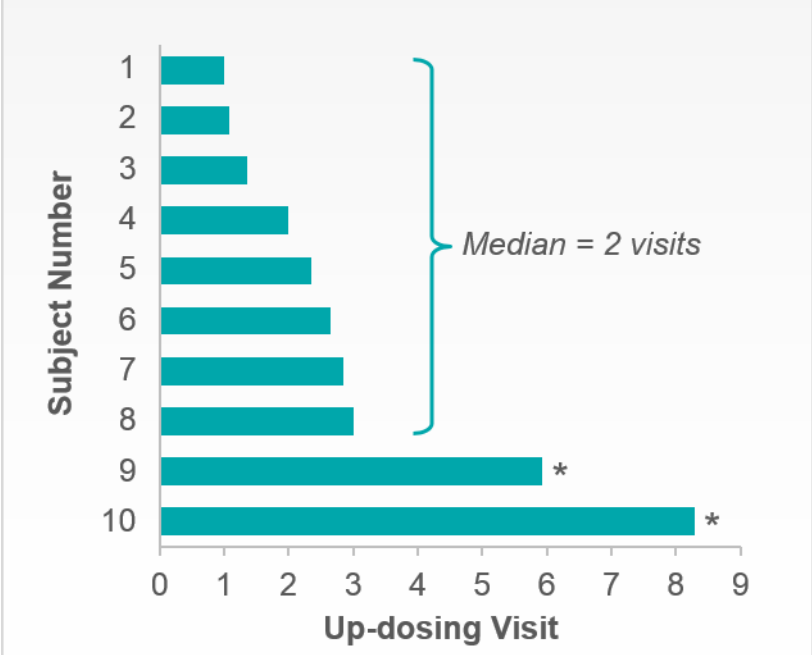
*Based on all available ARC002 data, updosing N=26; early maintenance N=41; extended maintenance N=11

Phase 2 Discontinuations Due to Tolerability Are Predictable and Manageable

- 80% (44/55) of patients completed up-dosing; 10 patients withdrew due to AE
- 8/10 withdrawals in the first 6 weeks
  - Range 14-42 days
  - Most at 80-mg dose or sooner
- All withdrawals had early onset of GI symptoms including nausea, abdominal pain or vomiting
  - One case of confirmed EoE (1.8%)
  - All symptoms resolved promptly upon withdrawal of AR101 (1 day to 3 weeks)
- **All withdrawals had psIgE >100 kU/L at baseline**

Discontinuation Timing by Patient

Number of office visits before discontinuing



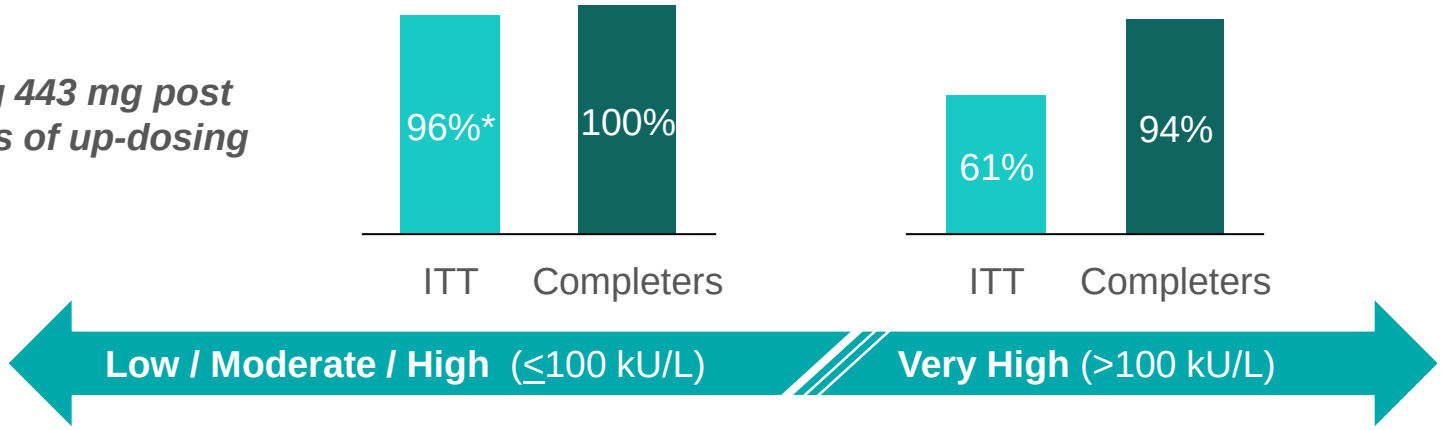
No discontinuations for AEs during maintenance; all in up-dosing

* Subjects had early onset of symptoms but tried to “power through” updosing

Potential to Predict Response to Peanut Allergy Treatment with AR101

ARC001/2 Retrospective Cohort Analysis Based on psIgE

Tolerating 443 mg post ~6 months of up-dosing

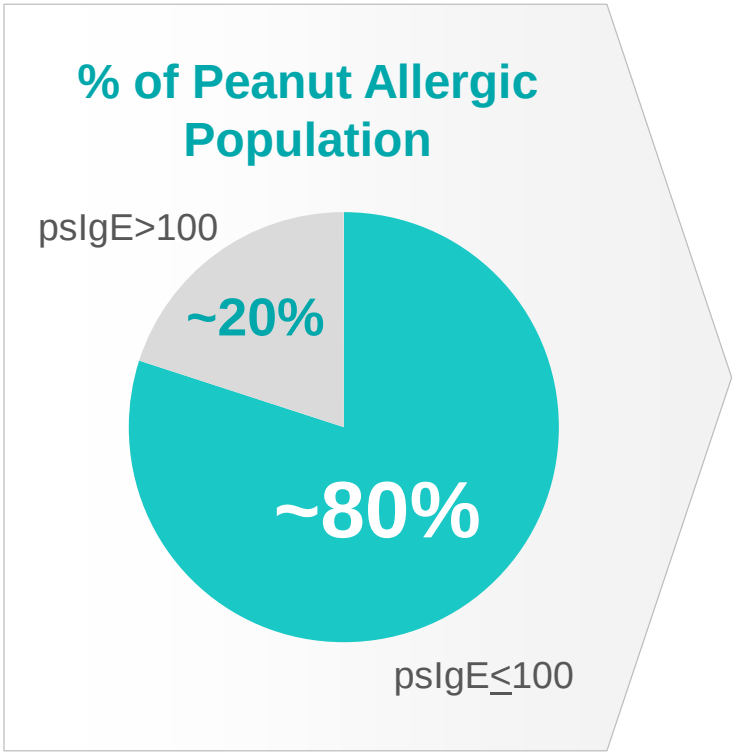


	n = 27	n = 28
Treatment-related Withdrawal	**0**	**10**
Failed Exit Challenge	0	1
Mean Skin Prick Test at Entry	15 mm	13 mm
Mean Tolerated Dose at Entry	20 mg	19 mg
% of Peanut Allergic Patients *across published data*	~80%	~20%

Source: ARC001 and ARC002 Phase 2 data
* One non-treatment related withdrawal in the ≤100 psIgE cohort

Potential psIgE Implications For AR101 Profile

To Be Confirmed By Phase 3 Program



Implications for AR101 Development

The ~80% patients with psIgE ≤100 kU_A/L:

1. Robust efficacy: 100% response rate
2. Excellent safety and tolerability: no treatment-related failures, no EoE
3. Ideal candidates for community allergists

The ~20% patients with psIgE >100 kU_A/L:

1. Robust, reliable efficacy in completers: ~60% success rate
2. Predictable, manageable side-effect profile
3. Potential for anti-IgE combination therapy
4. Consider referral to 'expert centers'

This Implies A Predictable AE Profile – Who, When, What

Source: ARC001 and ARC002 data; extensive literature review

Physicians and Patients Want Rapid, Reliable Protection to Clinically Meaningful Levels

Desired Treatment Attribute	Parents	Physicians
Degree of desensitization (1-4 peanuts)	✓	✓
Certainty of desensitization	✓	✓
Reduction in symptom severity	✓	✓
Short time to protection	✓	
Oral form factor for convenience	✓	

*Based on **qualitative interviews** with 50+ practicing allergists/KOLs and dozens of parents and patients and **quantitative surveys** with >300 allergists and >400 parents in U.S. and EU*

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Premium Pricing and Focused Field Force

Pharmacoeconomic Value

Robust, reliable desensitization to peanut protein in < 12 months

Reduced risk of severe reaction to accidental exposure – for fewer ER visits, hospitalizations and fatalities

Positive impact on allergist practice economics given higher patient inflow and retention

Tailored physician support services during up-dosing, maintenance

Specialty Call Point

Allergists:

~5,000
in U.S.

~10,000
in EU5*

- Private clinics, academic centers, community hospitals
- Focused field (i.e., 50-100 reps in U.S.) starting with current practitioners
- Focus on the patient experience

Expected pricing in line with other chronic therapies that protect against acute life-threatening events and improve QoL

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* Note: Includes physician with sub-specialty in allergy. Based on market research survey, interviews and analysis

AR101 Currently in Phase 3 Pivotal Trial PALISADE (ARC003) to Support U.S. and EU Approvals

Palisade TRIAL

- **Multi-Center**
  - ~65 clinical sites in the U.S./Canada/EU
- **500 Patients**
  - 400 patients ages 4-17
  - 100 patients ages 18-55
  - 3:1 randomization
- **Primary Endpoint**
  - Tolerate 1,043 mg
  - **Met by 90% of Phase 2 Completers**
- **Prospective analysis of outcome by baseline biomarker profile**
- Pediatric study to include ages 1-3, after PALISADE

Regulatory Progress in U.S. and EU

- Breakthrough Therapy Designation (ages 4-17)
- Fast Track Designation
- BLA Exclusivity
- Phase 3 protocol followed End-of-Phase 2 meeting
- EMA-approved Pediatric Investigation Plan (PIP)
- CTA approvals in EU
- January 2016 FDA Allergenic Products Advisory Committee

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PALISADE Consistent with Discussion at FDA AdComm in Jan 2016

Discussion points at AdComm	Alignment with PALISADE
Need to address at-risk population – most fatalities in teens and young adults	**Broad patient reach** – patients ages 4-55 enrolled; including patients with recent history of ER visits
Food Challenge as an approvable efficacy endpoint	**DBPCFC used** at entry and exit
Defined protection level, not just change from baseline	Completers assessed for **cumulative tolerated dose** at study exit
Meaningful level of protection – e.g., measured in number of peanuts tolerated	Primary endpoint: **tolerate 1,043 mg peanut protein (~ 4 peanuts)**
Reduction in symptom severity	**Demonstrated reduction in symptom severity** in Phase 2 – endpoint in Phase 3

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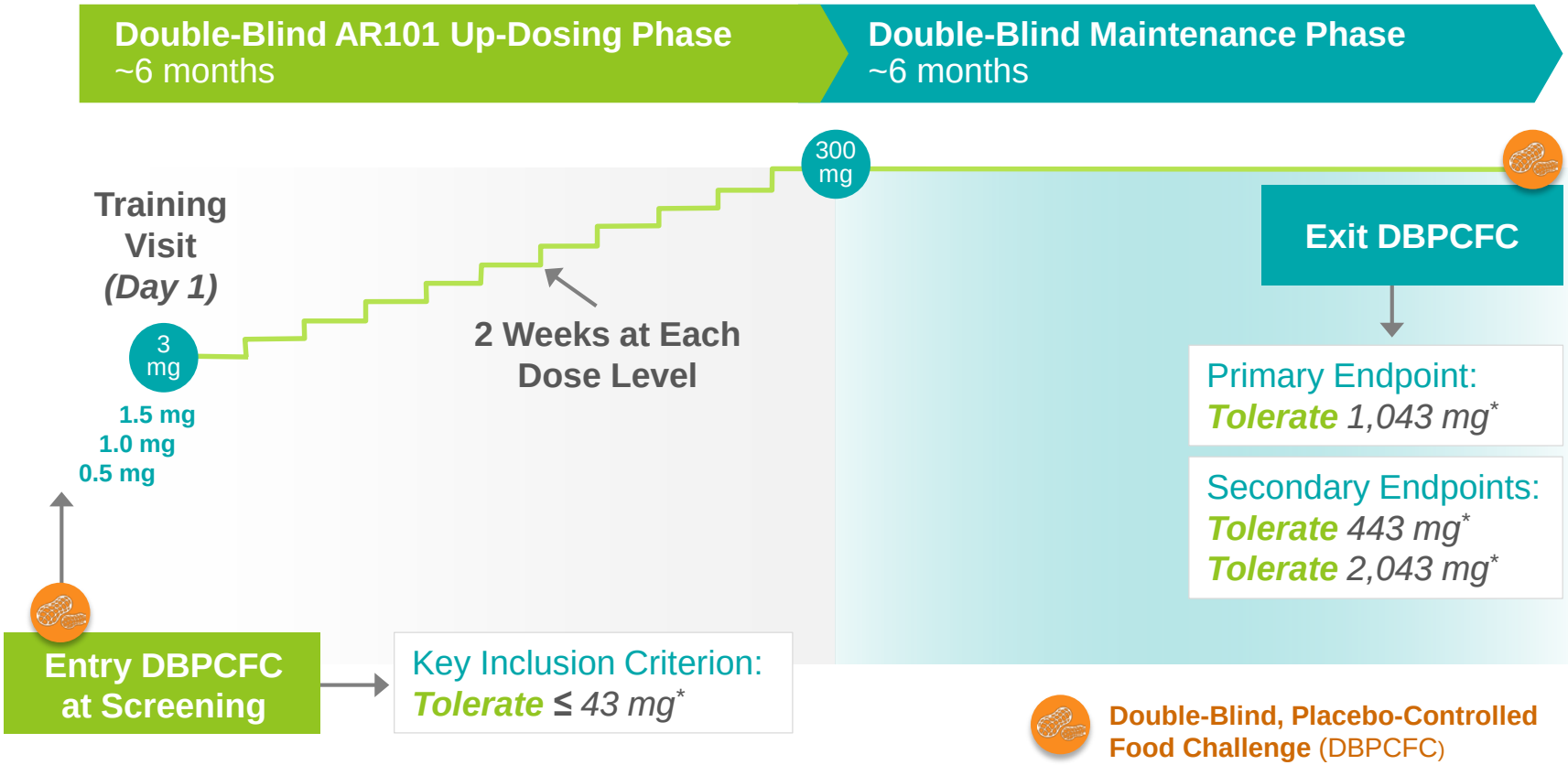
PALISADE Phase 3 Trial Builds on Success of AR101 Phase 2

Primary Endpoint: Tolerate Exit DBPCFC at 1,043 mg



* Reflects cumulative dose in the DBPCFC
Tolerate = dose is tolerated with no dose-limiting symptoms

AR101: Best-in-Class Profile Based on Phase 2 Data to Date

Meaningful protection in **≤ 6 months**

100% protection to ≥1.5 peanuts*

Protection achieved in **highest need** young adults

Th2 cell reduction and IgG4 increase in patients

>90% of AEs are mild, infrequent, transient

Convenient **oral** dosing, minutes a day

Alignment with **allergy practice** today

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*Based on Completer Analysis of ARC001/ARC002 Phase 2 Trials

Strong Proprietary Position with AR101

Biologic Data Exclusivity

- FDA provides for 12 years' marketing exclusivity during which time biosimilars may not be launched

Intellectual Property

- Initial AR101 patent issued in 4Q2015 covers formulation and manufacturing; others in process

Exclusive Commercial Supply Agreement

- Source material for AR101 provided by a subsidiary of Archer Daniels Midland; supplies ~ 70% of world's peanut flour

Manufacturing Expertise

- Building a 20K sq ft GMP manufacturing plant with tightly controlled know-how and trade secrets

First Mover Advantage

- Multiple hurdles for "me-too competition" including IP, formulation/manufacturing, demonstrating non-inferiority and overcoming brand loyalty

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AR101 for Peanut Allergy is the First Application of the CODIT™ Platform

		Pre-IND	Phase 2	Phase 3
AR101	**Peanut Allergy**	FDA Breakthrough Therapy and Fast Track Designations		
Program 2	**Egg Allergy**			
Program 3	**Undisclosed**			

Four Drivers of Growth:

1) Deliver AR101
2) Maximize AR101
3) Maximize CODIT™
4) Explore Complementary Technologies

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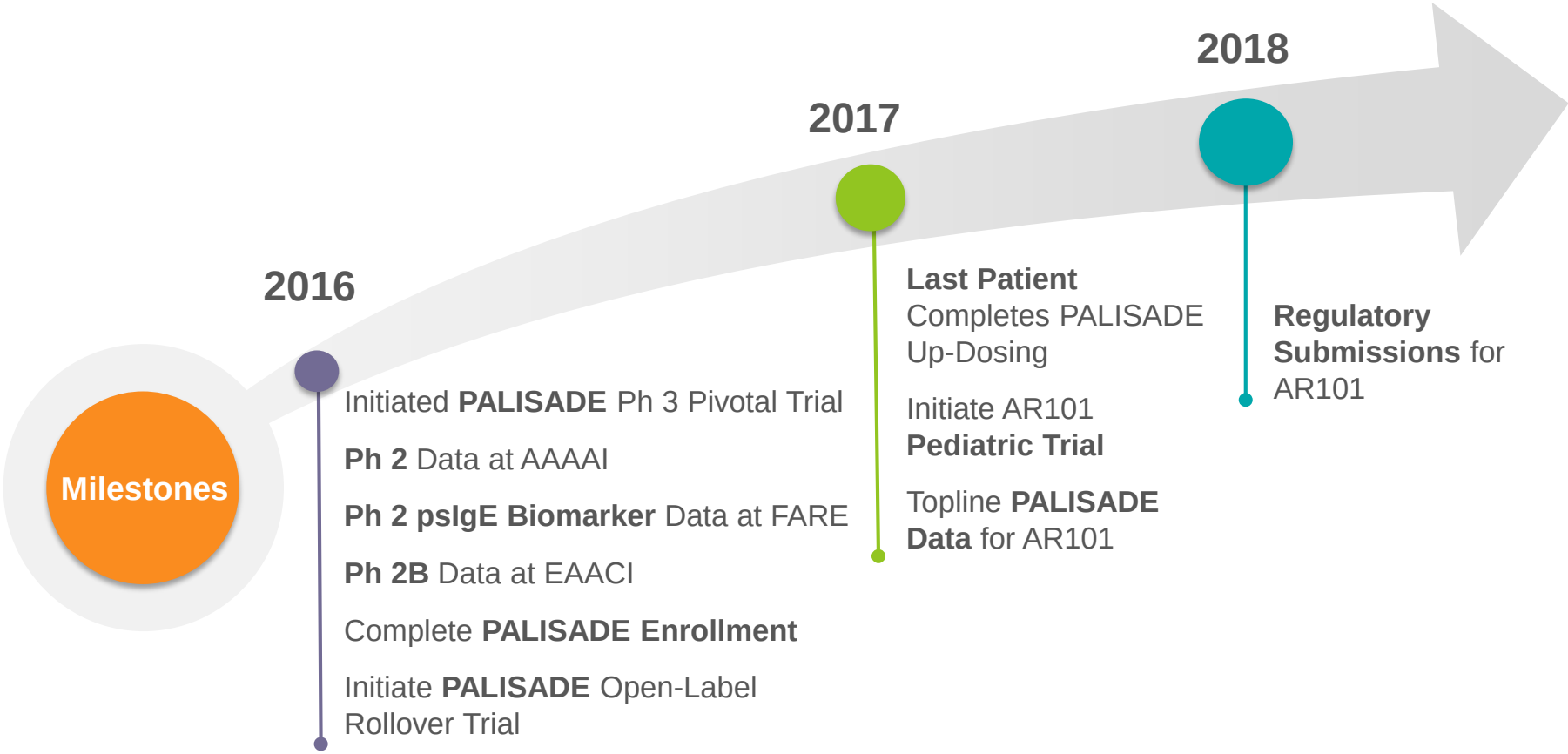
A Strong Team with Deep Experience in Drug Development and Approval

Leader	Role	Experience
Stephen Dilly, M.B.B.S. , Ph.D.	Chief Executive Officer	CHIRON, Genentech, SmithKline Beecham, APT
Daniel Adelman, M.D.	Chief Medical Officer	Genentech, sunesis, ALVINE PHARMACEUTICALS, INC., UCSF Medical Center
Sue Barrowcliffe	General Manager of Europe	CHIRON, APT, SmithKline Beecham, BRITISH BIOTECH
Warren DeSouza	Chief Financial Officer	ONYX PHARMACEUTICALS An Amgen subsidiary, Deloitte.
Jeffrey Knapp	Chief Operating Officer	Schering-Plough, Lilly, ADAMAS, AFFYMAX
Mary Rozenman, Ph.D.	SVP, Corporate Development and Strategy	McKinsey&Company, Longitude CAPITAL
Doug Sheehy	General Counsel and Secretary	CODEXIS, CV THERAPEUTICS, GUNDERSON DETTMER
William Turner	SVP, Global Regulatory and Quality	MedImmune, ALLERGAN, DYNAVAX INNOVATING IMMUNOLOGY

Executive Team of Drug Developers with 30+ NDAs, BLAs and MAAs

Anticipated AR101 Milestones



With $187M in Cash* We Are Well Capitalized to Deliver on Our Mission

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*Cash, cash equivalents and investments as of March 31, 2016

Appendix

Rationale for 300 mg Daily Maintenance Dose

Prior OIT Studies Showed Desensitization at Significant Multiple of 300 mg OIT Dose After >1 Year of Maintenance Treatment

Study	Maintenance Dose	Tolerated Dose at Challenge
Jones, 2009	300 mg →	**2,100 – 3,900 mg**
Cronin, 2014	300 mg →	**5,000 mg**
Vickery, 2015	300 mg →	**5,000 mg**

- ***Suggests Trend in Increasing Efficacy Over Time in AR101 Phase 2 May Be Real***
- ***Implies Increasing 'Safety Margin' Between Daily Dose and Sensitivity Threshold***
  - ***Low-Dose Maintenance Intended to Support Long-Term Compliance***

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* Evaluable (Completers): 29 in Jones, 20 in Cronin, 16 in Vickery

ARC001 Was Conducted in Patients with Moderate-to-Severe Peanut Allergy

Baseline demographics

	Placebo	Active (AR101)
N=	26	29
Median age (min, max)	8 years (4 to 14)	7 years (4 to 21)
Gender	16 male 10 female	20 male 9 female
History of reaction to peanut	26	29
Median peanut-specific IgE (min, max)	100.0 (3.5 to >100)	64.3 (0.8 to >100)
Median wheal diameter (min, max)	13 mm (5 to 26)	14 mm (5 to 30)
Median cumulative MTD* (min, max)	28 mg (3 to 43)	13 mg (3 to 43)

*MTD = maximum tolerated dose of peanut protein in screening DBPCFC

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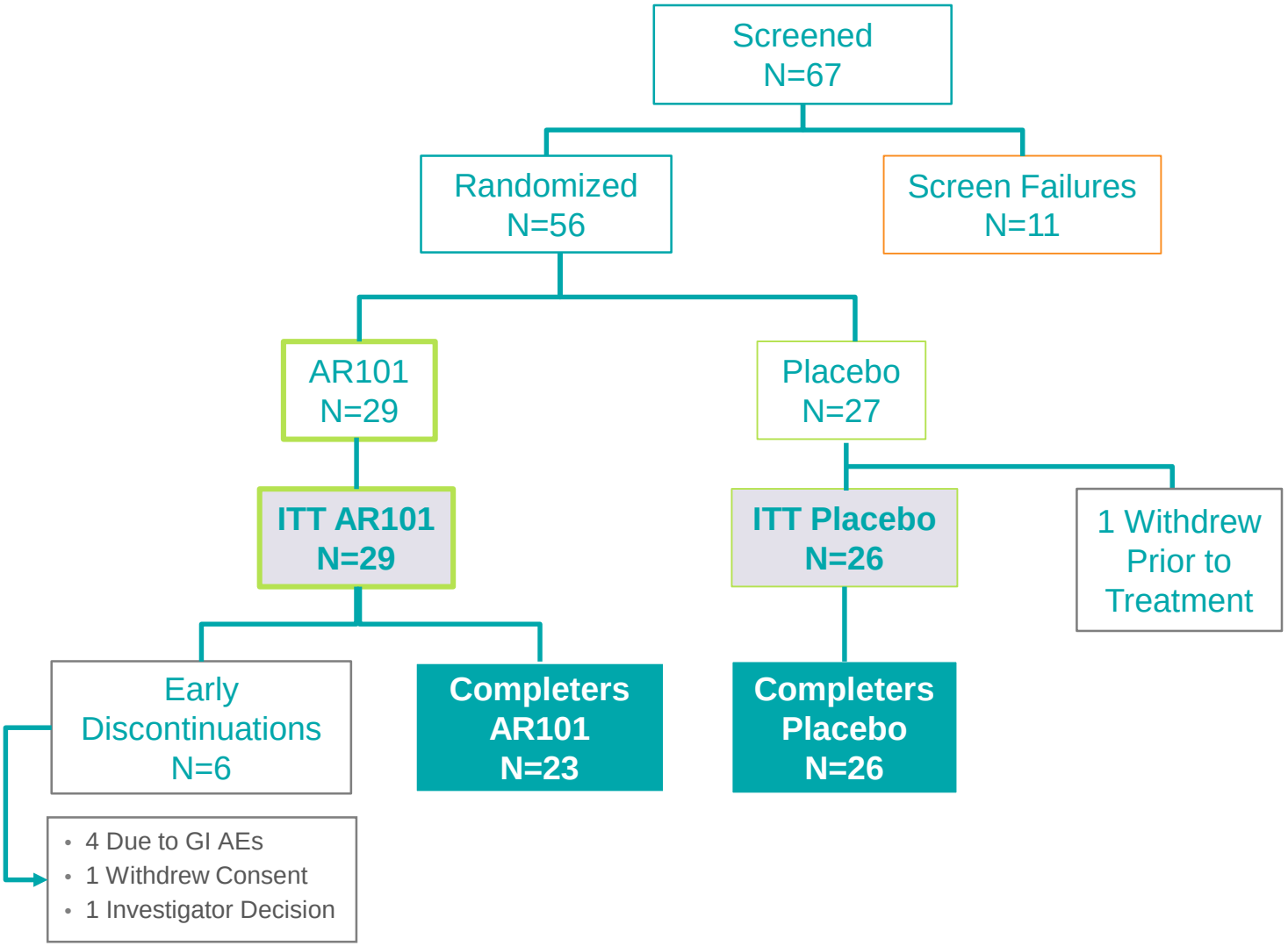
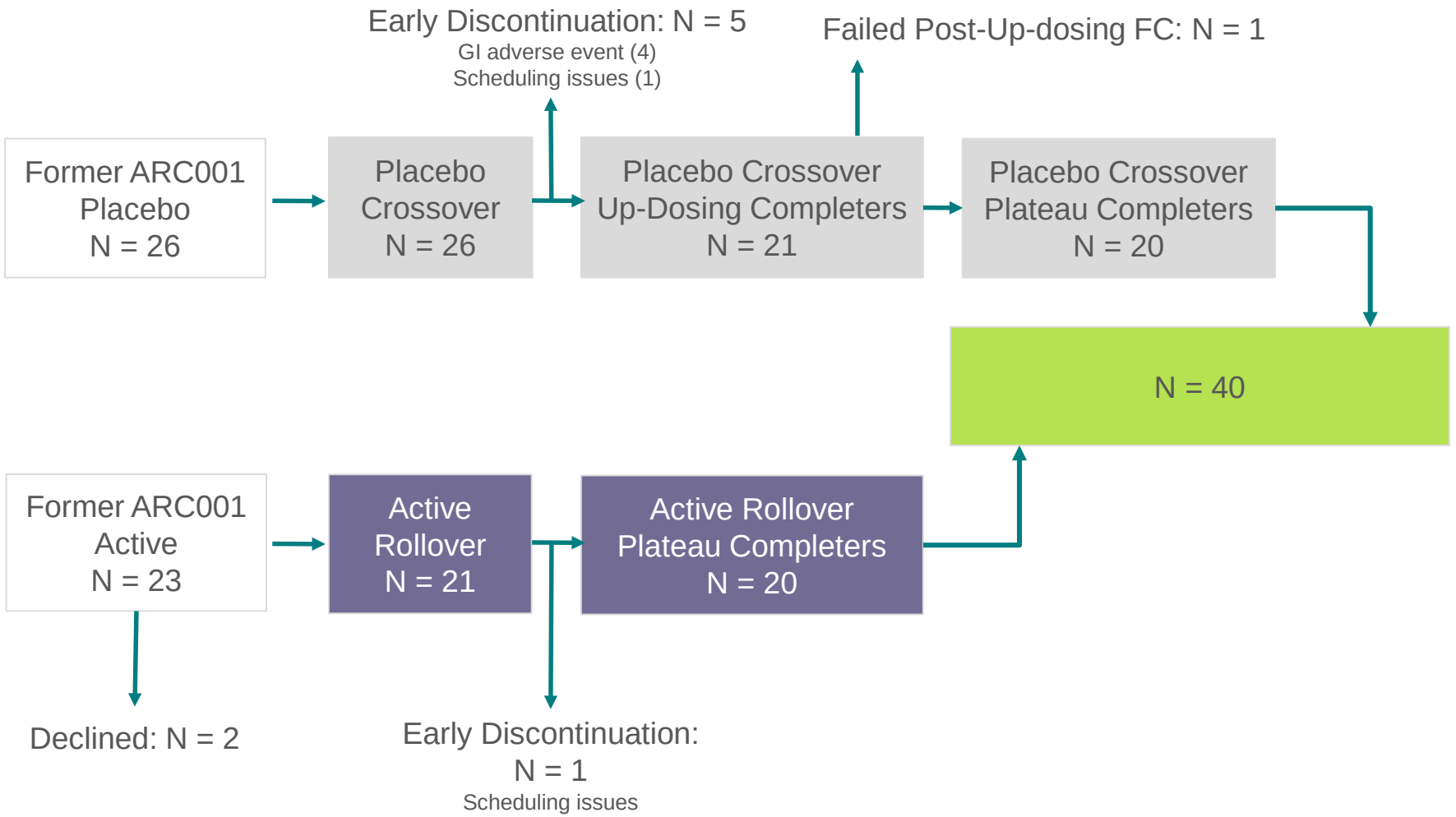
Burks W, et al. EAACI 2015

ARC001 Double-Blinded, Randomized Phase 2 Trial: Enrollment and Disposition

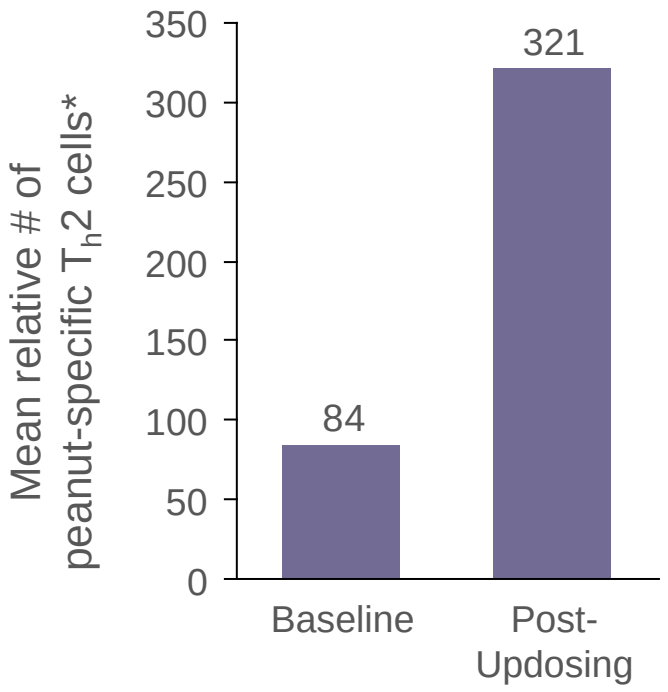


ARC002 Open-Label Phase 2b Trial: Enrollment and Disposition

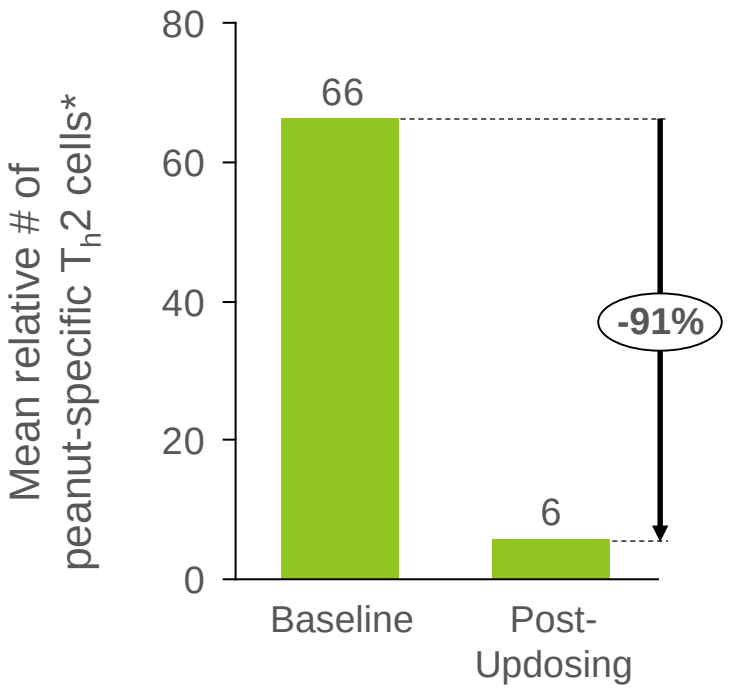


ARC001 Biomarker Data Reinforces the Clinical Benefit of AR101 in Peanut Allergy

Placebo Group (n=3)



Active Group (n=4)

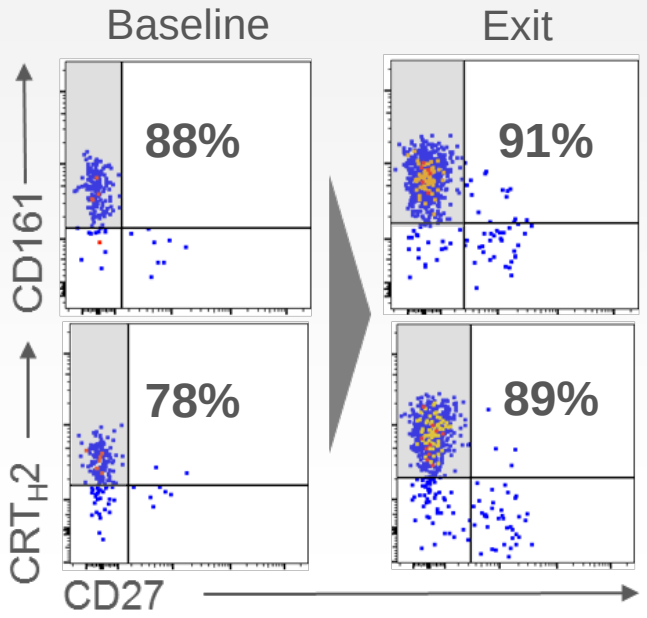


Treatment with AR101 is associated with deletion of peanut-specific T_h2 cells

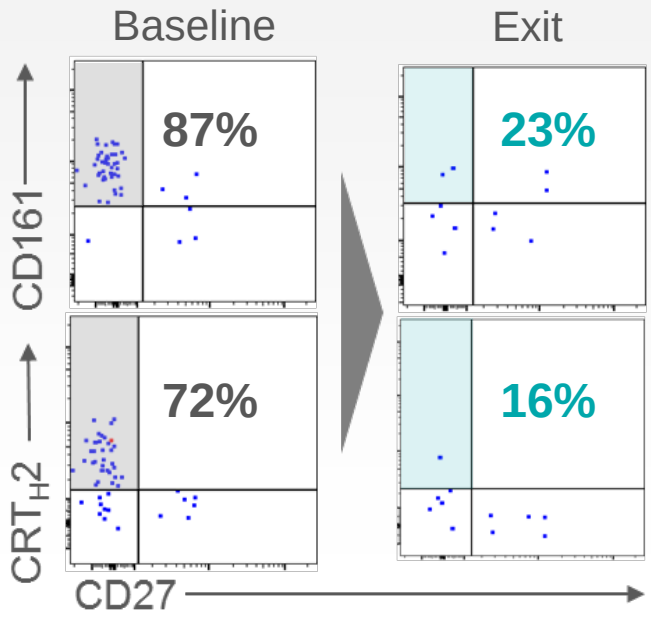
* Refers to number of peanut-specific Th2 lymphocytes per million CD4+ T lymphocytes
Source: Wambre E, et al. AAAAI 2016

Clinical Benefit of AR101 Associated with Deletion of Allergenic Lymphocytes

Placebo Phase 2 Patient Group



Active Phase 2 Patient Group



Treatment with AR101 Reduces Population of Proallergic T_h2 Cells (CRT_H2+ CD161+ CD27-)

Source: Wambre et al. 2016 (Submitted); Data presented at AAAAI 2016