RAPT THERAPEUTICS

Corporate Presentation

THE SCIENCE TO OVERCOME INFLAMMATION

January 2025

Disclaimer

Statements in this Presentation that are not statements of historical fact are forward-looking statements. Such forward-looking statements include, without limitation, statements regarding our research and clinical development plans; current and future drug candidates; the development of RPT904, including the expected timing of clinical trials and the availability of data therefrom and regulatory interactions; our anticipated cash runway; the therapeutic potential of RPT904; the potential commercial opportunity for RPT904, pricing and projected revenue; the therapeutic potential of our next generation CCR4 antagonist; the timing of the selection of our next generation CCR4 antagonist preclinical candidate; the therapeutic potential of tivumecirnon; the ability to obtain necessary regulatory approvals; business strategy and plans; regulatory pathways; and our ability to achieve certain milestones. Words such as "believe," "anticipate," "plan," "expect," "will," "may," "upcoming," "milestone," "potential," "target" or the negative of these terms or similar expressions are intended to identify forward-looking statements, though not all forward-looking statements necessarily contain these identifying words. These forward-looking statements are based on the current beliefs of the Company's management with respect to future events and trends and are subject to known and unknown risks and uncertainties that may cause our actual performance or achievements to be materially different from any future performance or achievements expressed or implied by the forward-looking statements in this Presentation. Risks and uncertainties that may cause actual results to differ materially include: risks inherent in the initiation, progress and completion of clinical trials and clinical development of our product candidates; the risk that clinical trials may have unsatisfactory outcomes; risks associated with preclinical development of product candidates; regulatory authorities, including the U.S. Food and Drug Administration (FDA) may not agree with our interpretation of the data from clinical trials of our drug candidates; we may decide, or regulatory authorities may require us, to conduct additional clinical trials or to modify our ongoing clinical trials; we may experience delays in the commencement, enrollment, completion or analysis of clinical testing for our drug candidates, or significant issues regarding the adequacy of our clinical trial designs or the execution of our clinical trials may arise, which could result in increased costs and delays, or limit our ability to obtain regulatory approval; our drug candidates may not receive regulatory approval or be successfully commercialized; unexpected adverse side effects or inadequate therapeutic efficacy of our drug candidates could delay or prevent regulatory approval or commercialization; uncertainties inherent in the conduct of clinical trials, our reliance on third parties over which we may not always have full control; our ability to enter into strategic partnerships on commercially reasonable terms; our ability to obtain additional financing; the uncertainty regarding the macroeconomic environment and other risks and uncertainties that are described in the "Risk Factors" section of our most recent Form 10-Q filed with the Securities and Exchange Commission, and any current and periodic reports filed thereafter. These forward-looking statements should not be taken as forecasts or promises nor should they be taken as implying any indication, assurance or guarantee that any assumptions on which such forward-looking statements have been made are correct or exhaustive or, in the case of such assumptions, fully stated in the Presentation. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date this Presentation is given. Although we believe that the beliefs and assumptions reflected in the forward-looking statements are reasonable, we cannot guarantee future performance or achievements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Presentation.

This Presentation discusses drug candidates that are under clinical study and which have not yet been approved for marketing by the U.S. Food and Drug Administration. No representation is made as to the safety or effectiveness of any drug candidates for any use for which such drug candidates are being studied.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and other data about our industry. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

RAPT is Developing Transformative Therapies for High-Value Inflammatory Diseases

- RPT904 is a half-life extended omalizumab (Xolair®) "bio-better" with potential to transform the treatment of Food Allergy (FA) and Chronic Spontaneous Urticaria (CSU)
  - Potential best-in-class profile with less frequent dosing and greater compliance
  - Plan to initiate Phase 2b trial in FA in 2H 2025; data expected 1H 2027
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- Company well funded with cash runway projected through multiple clinical milestones including Phase 2b FA data

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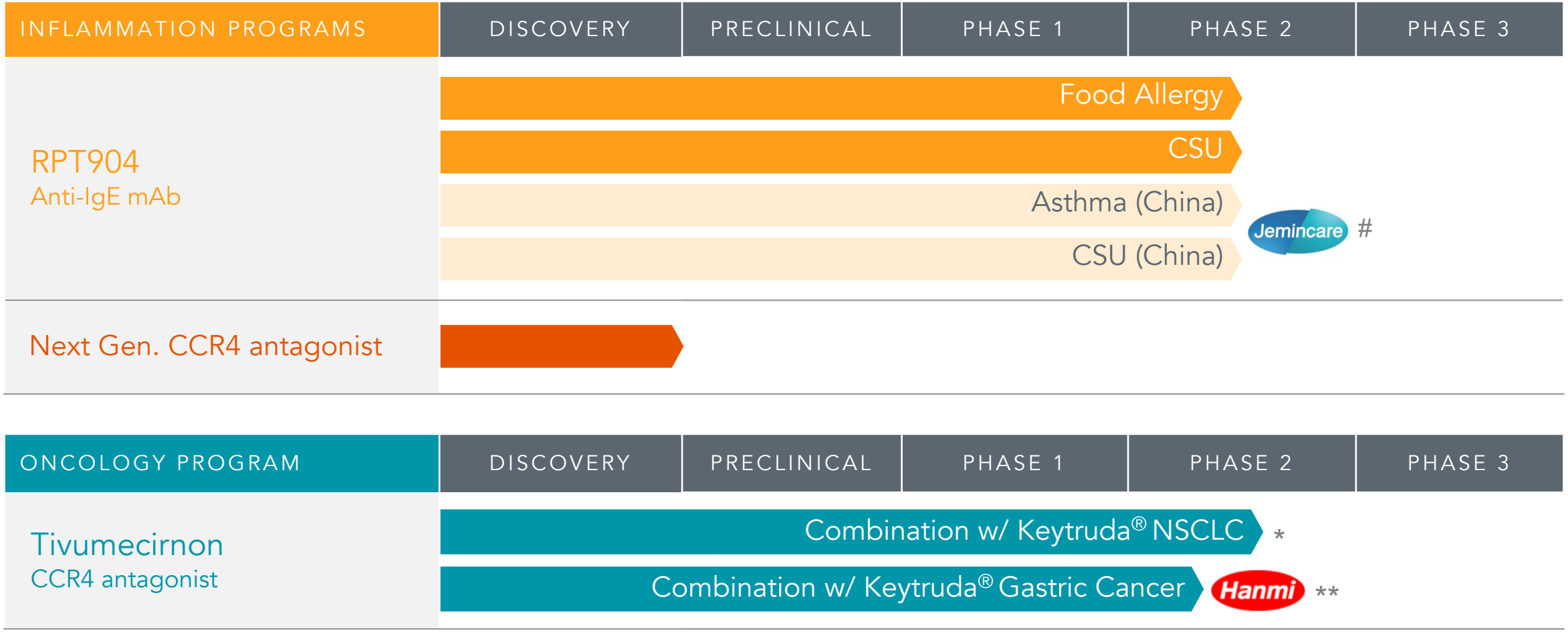
RAPT Therapeutics Pipeline



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* Clinical collaboration with Merck
** Hanmi has licensed rights in Korea, Taiwan, China, Hong Kong and Macau

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RPT904

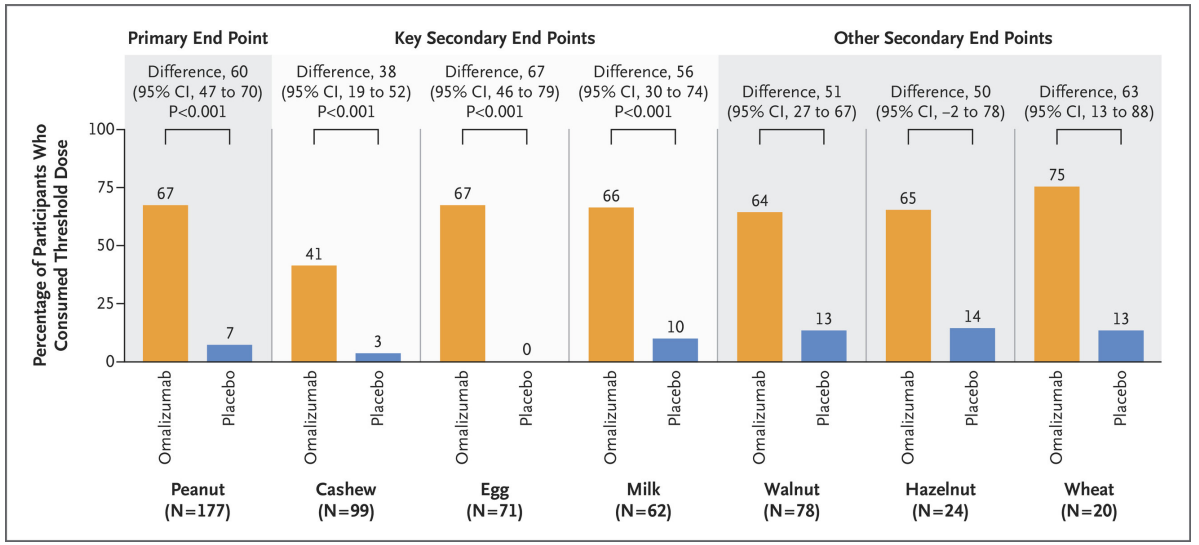
Potential to Transform the Treatment of Food Allergy and CSU

Omalizumab is an Emerging Blockbuster in Large and Growing Food Allergy Market

- There are ~17M FA patients in the US[1] → ~50% have had severe reactions[2] → ~3.4M ER visits/year[2]
- Treatment dominated by inconvenient treatments: food avoidance and single allergen desensitization (i.e. OIT)
- Omalizumab is the only FDA-approved therapy to reduce allergic reactions to multiple foods, based on the Phase 3 OUtMATCH study
- Rapid launch: 30k FA patients on omalizumab after two quarters on the market

[1] LifeSci report 2024; [2] FARE (Food Allergy Research & Education) 2024 report

OUtMATCH: Omalizumab is Highly Active Across Multiple Common Food Allergens



Dosing at Q2W or Q4W based on the FA dosing table

Strong Reception to RPT904's Profile from Prescribers and Payers

- Despite omalizumab's early success, payers and prescribers would welcome a longer-acting treatment like RPT904 for increased compliance and convenience*

RPT904 TPP

- Similar efficacy profile to omalizumab
- Similar safety profile to omalizumab
- Q8W/Q12W SC dosing

Prescriber Use

- Expect to use RPT904 in ~16% of their moderate-to-severe FA patients

Payer Reimbursement

- Omalizumab biosimilars expected with ~40% price erosion
- TPP would support ~30% premium over omalizumab biosimilars

- Estimate ~$4.5B in peak US sales for FA

* Based on primary market research n=140 prescribers, Oct 2024 and n=45 payers, Nov 2024

CSU Offers Additional Commercial Upside

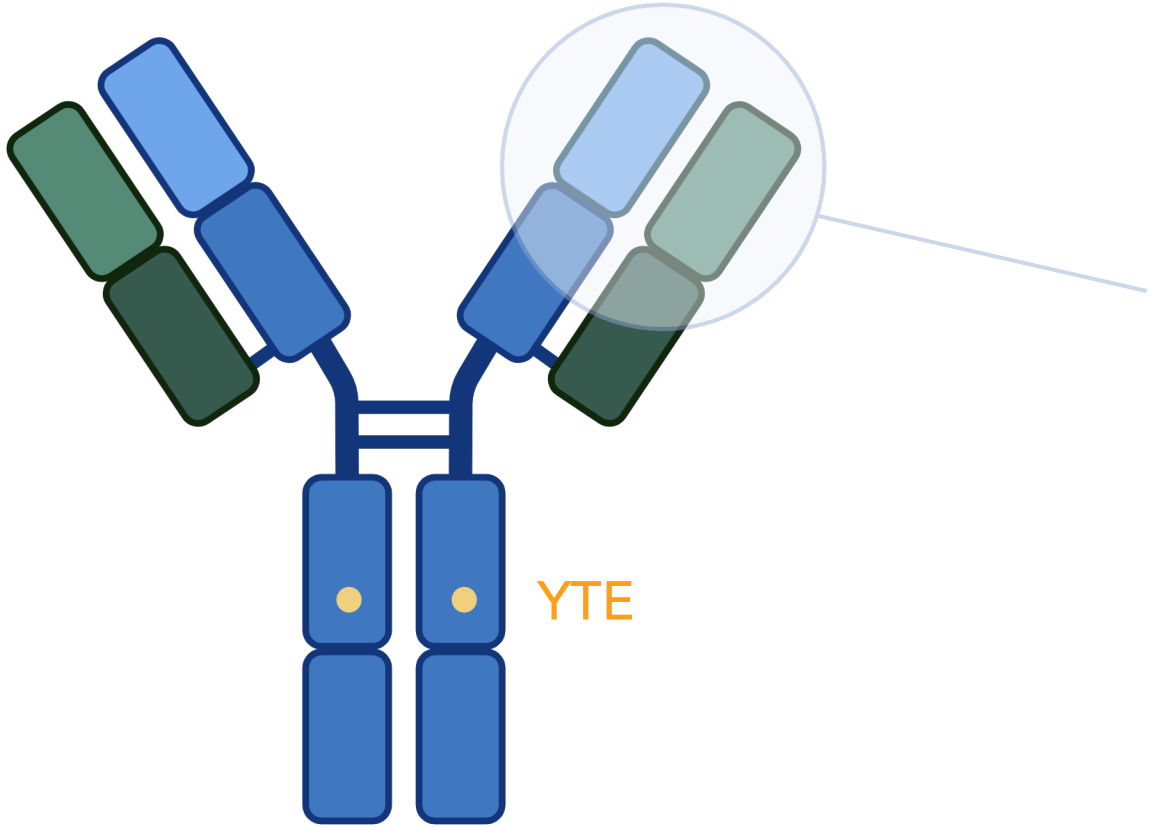
- CSU affects >1M patients in the US[1]
- Antihistamines are first treatment step, but ~400k patients not controlled on antihistamines[2]
- Omalizumab is only approved biologic for CSU after failure of antihistamines
- RPT904 positioned to be preferred choice in front-line setting due to improved compliance and convenience compared to omalizumab[3]
  - Even with efficacy 20% below omalizumab, prescribers still prefer the less frequent dosing for RPT904[3]
- Estimate ~$1B in peak US revenues in CSU

[1] Nature 2022; [2] Globaldata report, Aug 2024 and various equity research reports; [3] Primary market research n=10 prescribers, Dec 2024

RPT904

A Potential Best-in-Class Omalizumab Bio-Better mAb

RPT904: Minimally Altered to Optimize Dosing Frequency While Targeting Clinically Validated Epitope



- Omalizumab as starting point
  - Retains clinically validated epitope
- YTE mutation: half-life extension
- Additional conservative improvements
  - Affinity maturation: ~4-fold affinity over omalizumab
  - PTM site removal: Improved manufacturability and stability
  - Framework humanization: reduces potential for immunogenicity
- Loss of exclusivity in 2041 excluding any PTE or formulation / device patents

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Potential Best-In-Class anti-IgE Option for Food Allergy

Potential Attributes	RPT904	Omalizumab
Clinically validated epitope	✓	✓
Effective on multiple allergens	✓	✓
Convenience of Q8W/Q12W dosing	✓	✗
Access to High IgE and/or Weight Patients	✓	✗
Simplified Dosing Table	✓	✗

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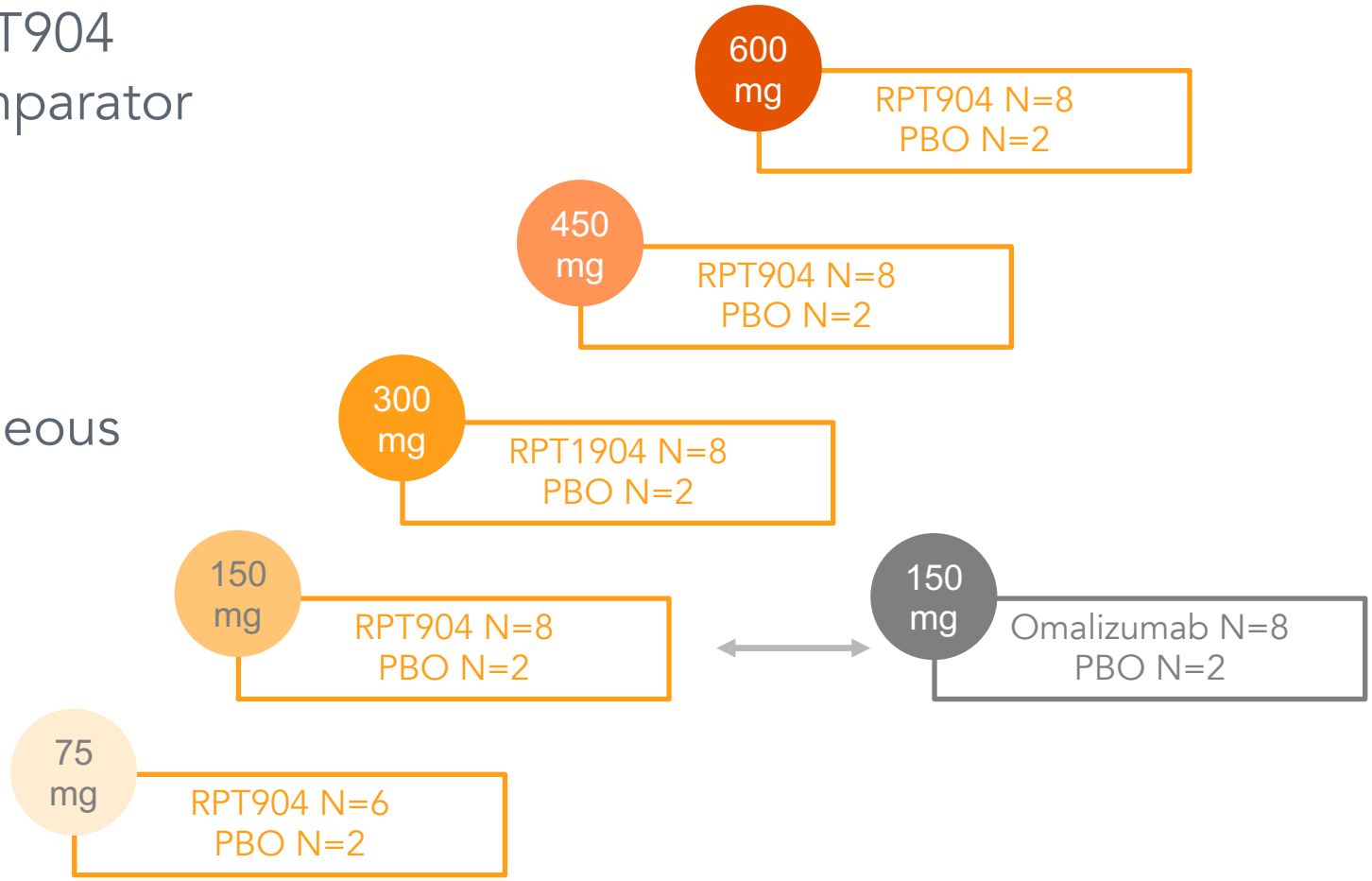
RPT904
Phase 1 Healthy Volunteer Data and Dose Estimations

Jemincare Phase 1 Healthy Volunteer Study

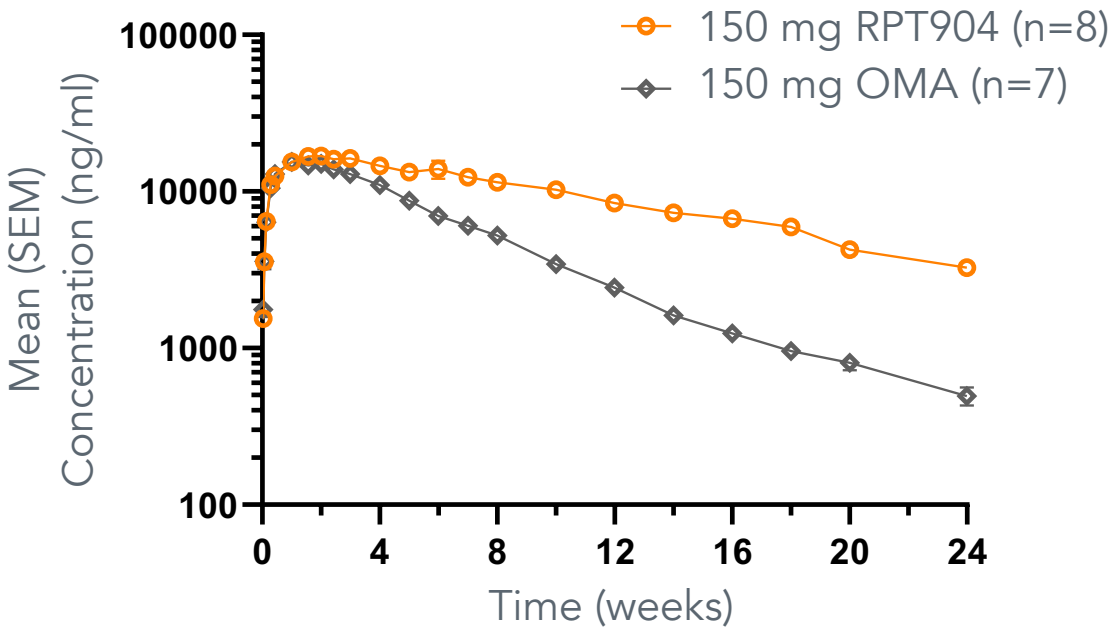
- **Design:** Double-blind, placebo-controlled single ascending dose study of RPT904 (JYB1904) and an omalizumab comparator in healthy Chinese subjects
- **Objectives:** Tolerability, safety, immunogenicity, PK and PD
- **Route of administration:** subcutaneous (SC) injection
- **Duration:** 24 weeks



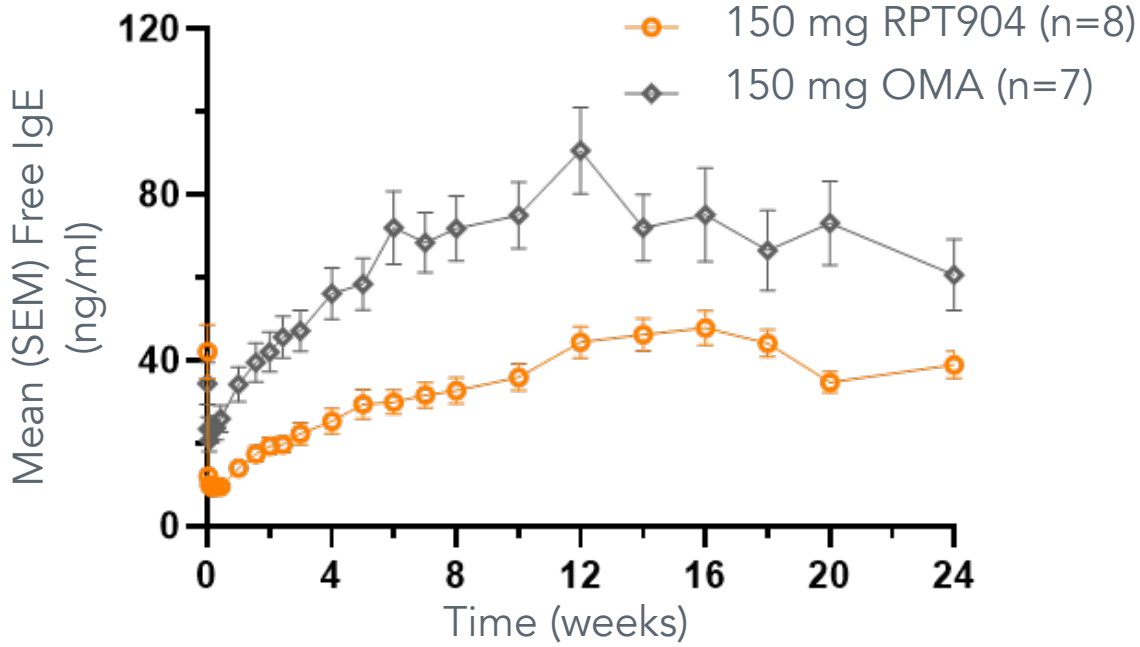
Jemincare Phase 1 Trial of RPT904 Shows Longer Half-Life and Superior IgE Reduction Compared to Omalizumab

- At 150 mg, half life for RPT904 was 60 Days vs. 26 days for omalizumab
- Superior free IgE reduction relative to omalizumab
  - PD comparisons of absolute free-IgE levels to other trials not possible due to non-standard free-IgE assay format

Pharmacokinetics



Free IgE



Omalizumab FA Dosing Table is Complex and Excludes High IgE/Weight Patients

Pretreatment Serum IgE (IU/mL)	Dosing Freq.	Body Weight (kg)												
		≥10-12	>12-15	>15-20	>20-25	>25-30	>30-40	>40-50	>50-60	>60-70	>70-80	>80-90	>90 - 125	>125 - 150
		Dose (mg)												
≥30 - 100	Every 4 Weeks	75	75	75	75	75	75	150	150	150	150	150	300	300
>100 - 200		75	75	75	150	150	150	300	300	300	300	300	450	600
>200 - 300		75	75	150	150	150	225	300	300	450	450	450	600	375
>300 - 400		150	150	150	225	225	300	450	450	450	600	600	450	525
>400 - 500		150	150	225	225	300	450	450	600	600	375	375	525	600
>500 - 600		150	150	225	300	300	450	600	600	375	450	450	600	
>600 - 700		150	150	225	300	225	450	600	375	450	450	525		
>700 - 800	Every 2 Weeks	150	150	150	225	225	300	375	450	450	525	600		
>800 - 900		150	150	150	225	225	300	375	450	525	600			
>900 - 1000		150	150	225	225	300	375	450	525	600				
>1000 - 1100		150	150	225	225	300	375	450	600					
>1100 - 1200		150	150	225	300	300	450	525	600					
>1200 - 1300		150	225	225	300	375	450	525						
>1300 - 1500		150	225	300	300	375	525	600						
>1500 - 1850			225	300	375	450	600							

Insufficient data to Recommend a Dose

- Approved food allergy table for omalizumab based on well-established PK/PD models and target free IgE levels
  - 8 dose strengths 75-600 mg; 2 frequencies Q2 or Q4W (13 different regimens)
- ~30% of FA patients excluded from label due to high IgE/weight
- Approach: Use Phase 1 PK data and established omalizumab PD models to estimate doses and dose frequencies for RPT904

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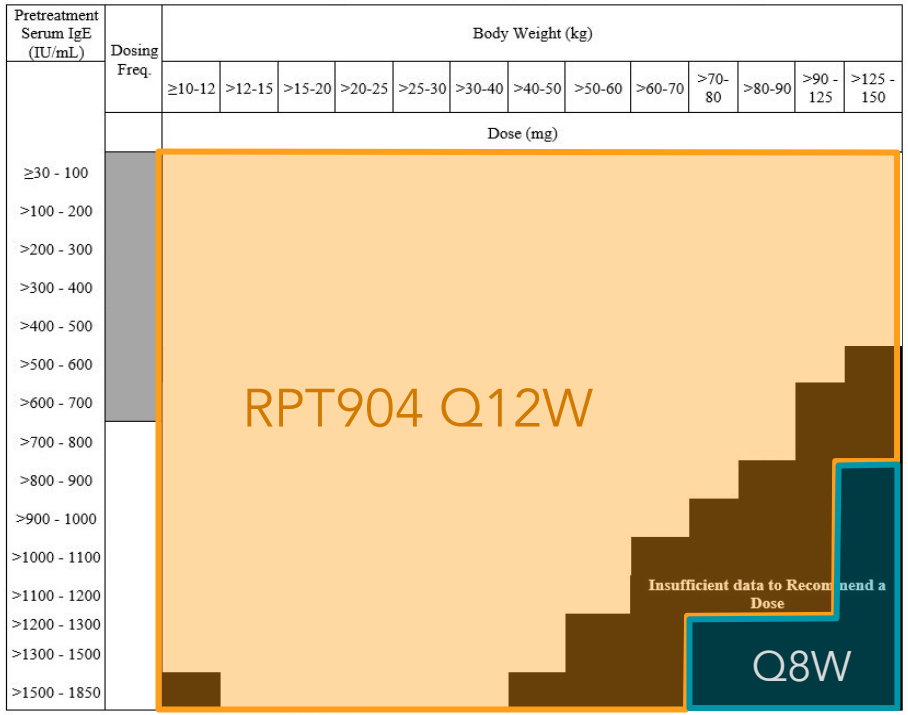
Pharmacodynamic Simulations Support Q12W Dosing In Most Patients

Free IgE Simulation*

- Omalizumab 150 mg Q4W is approved dose and achieves target IgE levels
  - Q8W would not achieve target levels
- RPT904 at 150 mg Q12W predicted to achieve target IgE Levels
- Perform simulations at 150, 300 and 600 mg Q12W across table

RPT904 Q12W up to 600 mg covers all OMA and many OMA-excluded patients



*Target free IgE of 25 ng/ml ensures ≥ 95% of subjects achieve therapeutic level of < 50 ng/ml (Hochhaus et al. 2003)

PK/PD projections based on omalizumab modeling in mod-severe asthma (Lowe, et al 2008)

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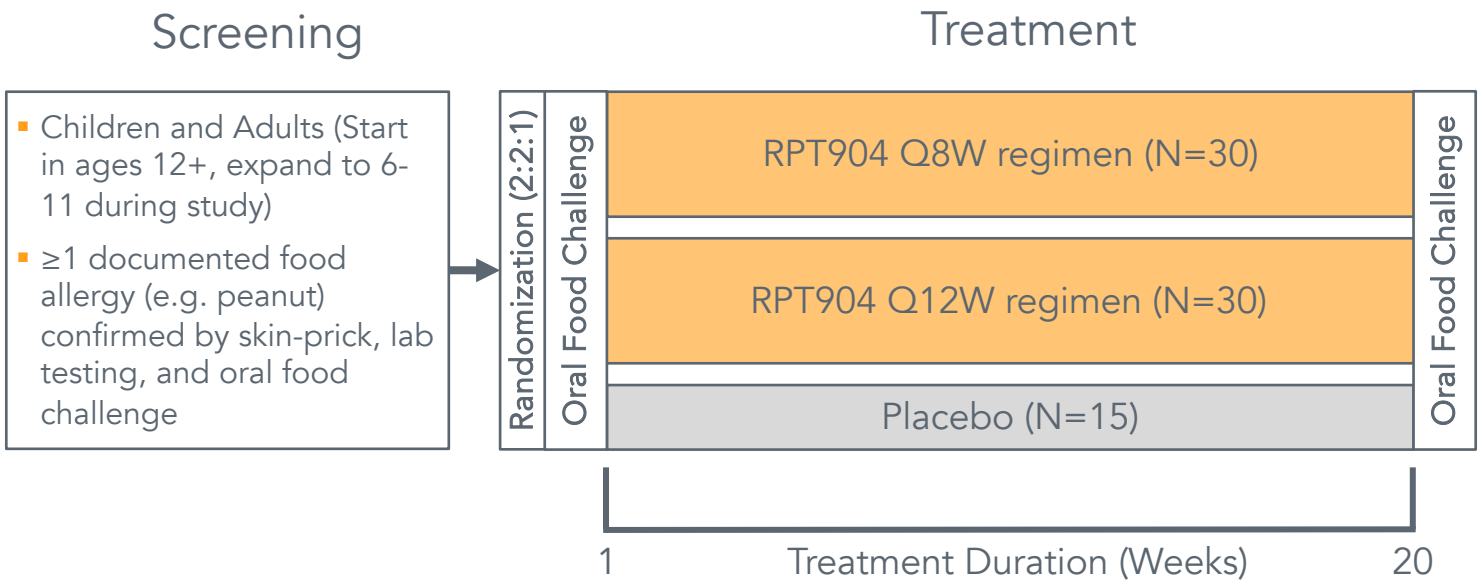
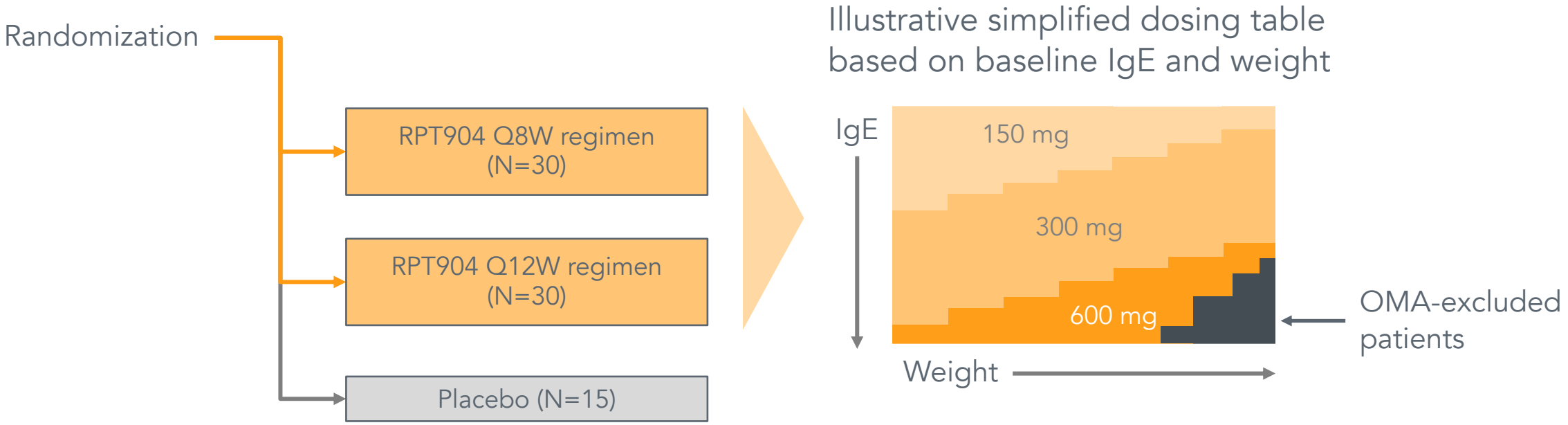
RPT904
Phase 2 Trial Designs

Proposed Phase 2b Randomized Double-Blind Placebo-Controlled Study of RPT904 Monotherapy in Food Allergy



- Primary Endpoint: Prespecified threshold by oral food challenge
- N=75 (2:2:1 Q12W, Q8W regimens and placebo)
- US/European clinical sites
- ~18 months from FPI to topline data

Phase 2b FA Simplified Dosing Regimens Cover Entire Omalizumab Dosing Table



- 3 dose strengths compared to omalizumab's 8 dose strengths
- Plan is to include patients currently excluded from omalizumab label
- Additional PK/PD studies planned in HVs and atopic subjects to help refine dosing

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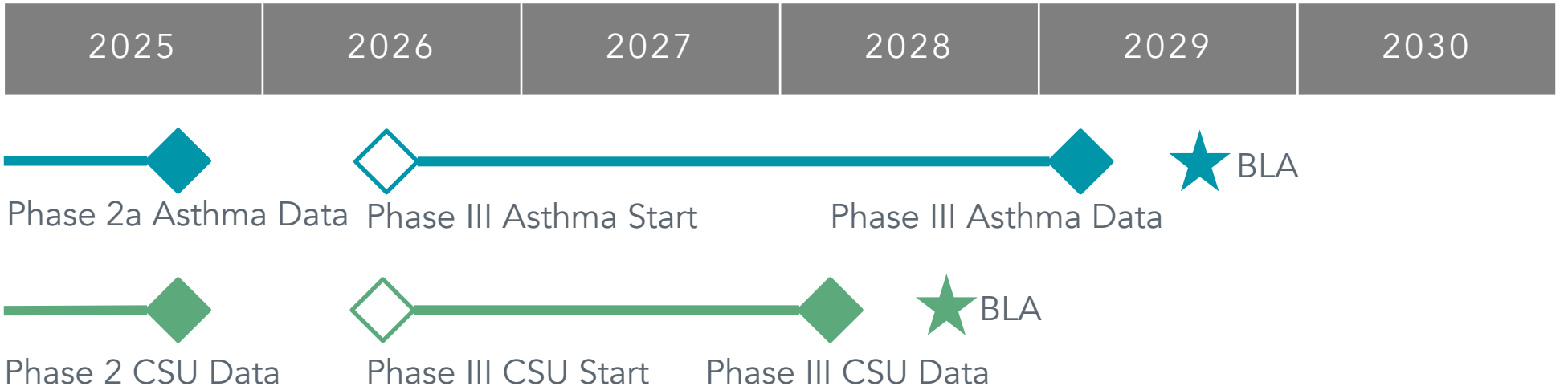
Jemincare Asthma and CSU Clinical Development Plan



Asthma

Phase 2a Asthma
- Patients with mod-severe asthma (N=60)
- 3 dose levels of JYB1904 Q8W vs. omalizumab
- Primary endpoint: PK/PD

Phase 3 Asthma
- Patients with mod-severe asthma (N=1000)
- Non-inferior design vs. omalizumab

CSU

Phase 2 CSU
- Patients with poor response to AH (N=135)
- Q8W / Q12W JYB1904 vs. omalizumab Q4W
- Primary endpoint: Efficacy

Phase 3 CSU
- Patients with poor response to AH (N=200-400)
- Non-inferior design vs. omalizumab

AH: antihistamines

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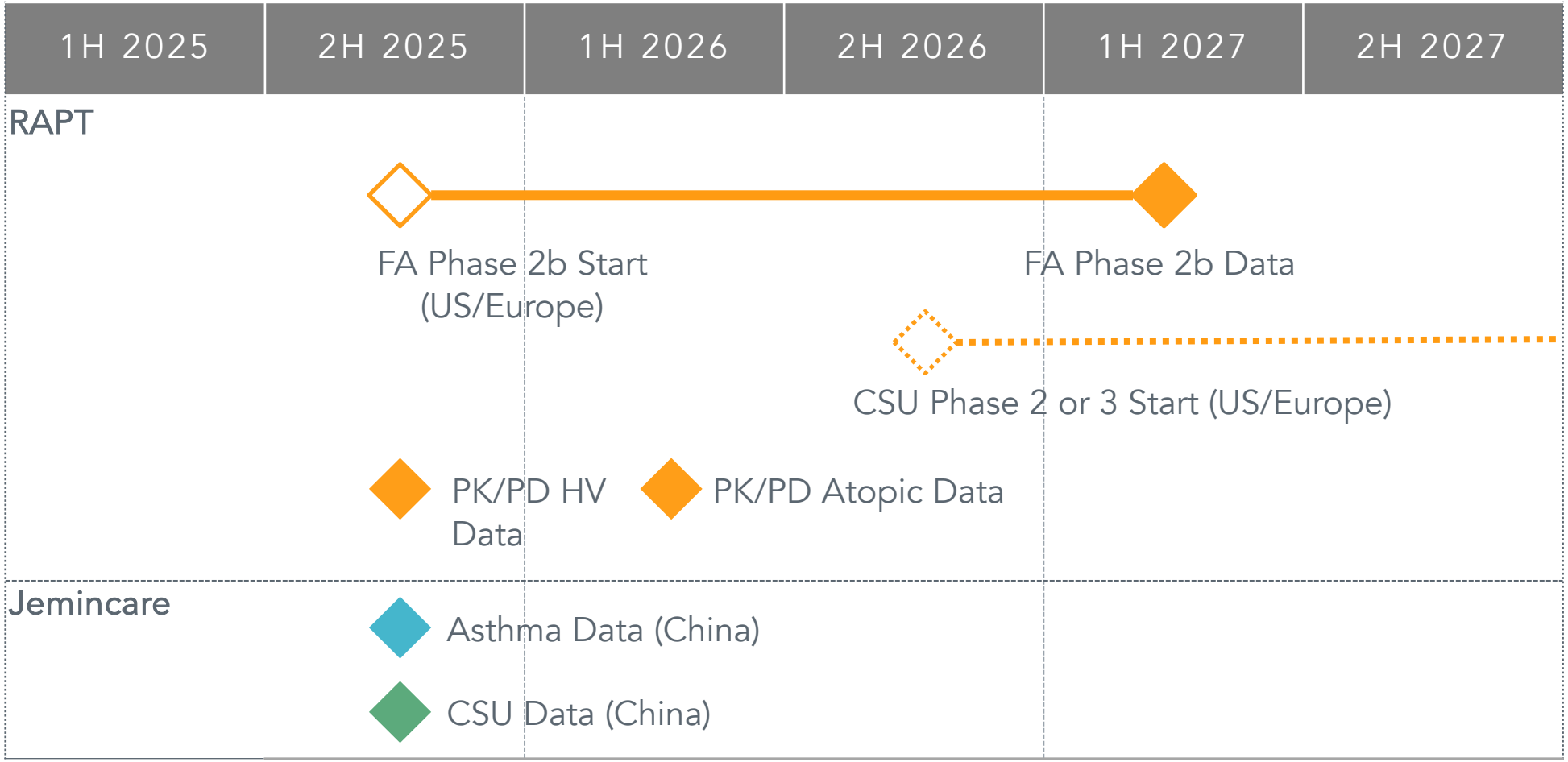
RPT904 Anticipated Milestones




Next Generation
CCR4 Antagonist
First-in-Class Oral Th2 Inhibitor
for Inflammatory Diseases

First-in-Class Oral Th2 Inhibitor for Inflammatory Diseases

- Highly potent and selective once-daily oral CCR4 antagonist designed to safely reduce Th2-inflammation
- Next generation CCR4 antagonist with improved potency and liver safety margins
- Data from zelnecirnon Phase 2 trials in asthma and atopic dermatitis to be disclosed, targeting a medical meeting
- Expect to select Preclinical Candidate 1H 2025

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Thank You