



# Pioneering Precision Medicine for Neurodegeneration

NASDAQ: ACIU | Investor Presentation, January 2023



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[www.acimmune.com](http://www.acimmune.com)

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# AC Immune at a glance

Pioneering new ways to treat neurodegenerative diseases



**Broad, diversified pipeline in neurodegeneration**  
One Phase 3 program; multiple Phase 2 programs



**Key differentiation: Precision Medicine**  
Integrates therapeutics and diagnostics



**Multiple global partnerships**  
>CHF 3 billion in potential milestones



**Clinically validated technology platforms**  
Best-in-class small molecules and biologics



**Strong Balance sheet**  
Funded into Q3 2024



- Based in Lausanne, Switzerland
- 145 employees
- Listed September 2016 (NASDAQ: ACIU)
- 83.6 million shares outstanding<sup>1</sup>
- Cash of CHF 140.5 million<sup>2</sup> (~USD 142.6 million)

(1) As of September 30, 2022; excluding treasury shares; (2) As of September 30, 2022



# Neurodegenerative diseases represent a large and growing market

Prevalence expected to increase drastically as the population ages

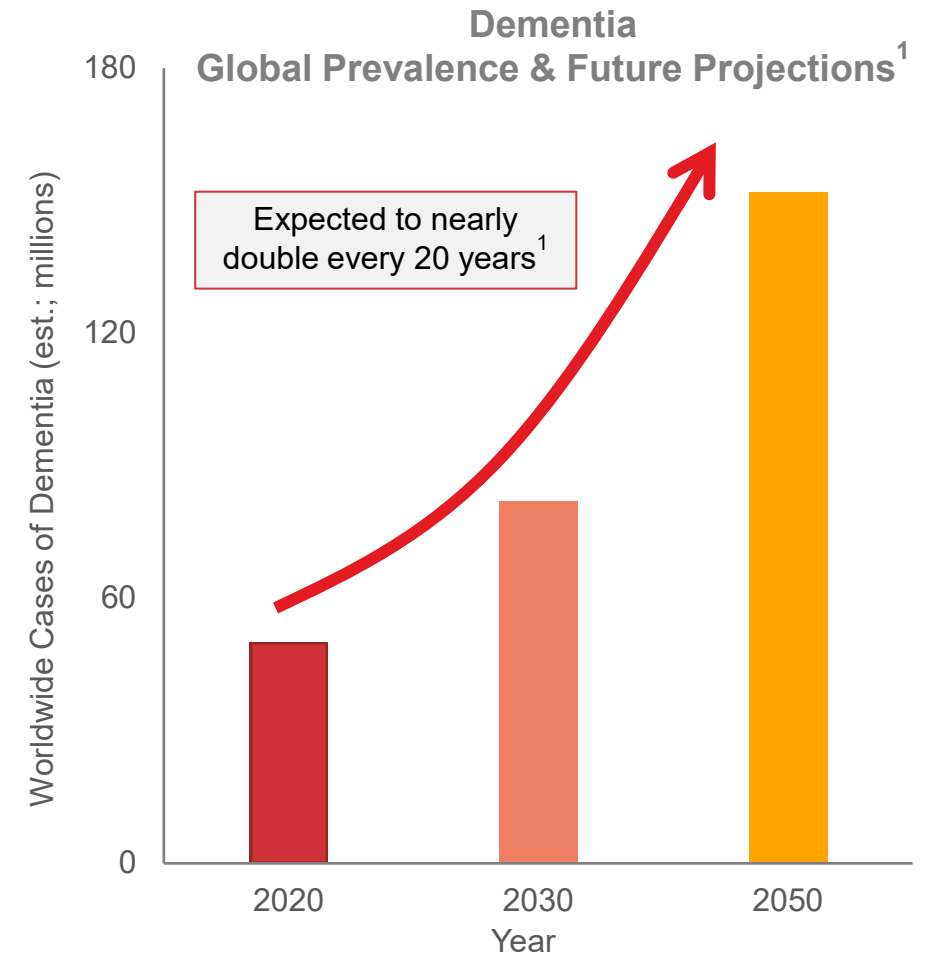
**>50 Million** people worldwide living with dementia<sup>1</sup>

**>\$1 Trillion** global annual cost of dementia<sup>1</sup>

**>6 Million** people worldwide living with PD<sup>2,3</sup>

**20-50%** of people over age 80 with LATE<sup>4,5</sup>

**>8 Million** in USA<sup>6</sup> with different NeuroOrphan diseases



(1) [Alzheimer's Disease International](#); (2) [Parkinson's disease](#); (3) [Michael J Fox Foundation](#); (4) [Limbic-predominant age-related TDP-43 encephalopathy](#); (5) [Nelson et al. Brain 2019](#); (6) [National Institute of Neurological Disorders and Stroke](#)

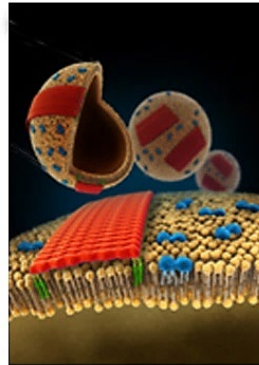
# SupraAntigen<sup>®</sup> and Morphomer<sup>®</sup> platforms

An integrated approach to Central Nervous System (CNS)-specific therapies

**CNS-optimized**

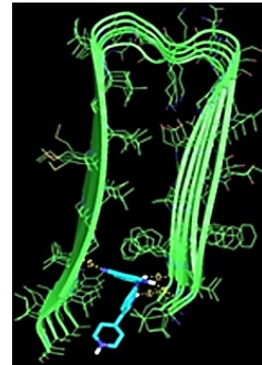
**Clinically validated**

**SupraAntigen<sup>®</sup>**



**Vaccines &  
Antibodies**

**Morphomer<sup>®</sup>**



**Small  
Molecules**

**Conformation-  
specific**

**Precision medicine  
enabling**

# External validation and cash generated by 5 partnering<sup>1</sup> deals

Managing risk and retaining significant upside

Biologicals

Small molecules

Product	Dev. phase	Total value <sup>2</sup>	Upfront <sup>2</sup>	Milestones received to date <sup>2</sup>	Royalties	Partners
<b>Crenezumab</b> (anti-Abeta antibody)	Phase 2	USD 340	USD 25	USD 40	Mid-single digits to mid-teens	<b>Genentech</b> <small>A Member of the Roche Group</small>
<b>Semorinemab</b> (anti-Tau antibody)	Phase 2	CHF 430	CHF 17	CHF 42	Mid-single digits to low-double digits	<b>Genentech</b> <small>A Member of the Roche Group</small>
<b>ACI-35</b> (pTau Vaccine)	Phase 1b/2a	CHF 500	CHF 26	CHF 5	Low-double digits to mid-teens	<b>janssen</b> <small>PHARMACEUTICAL COMPANY OF Johnson &amp; Johnson</small>
<b>Tau PET<sup>3</sup> imaging agent</b>	Phase 3 <sup>4</sup>	EUR 160	EUR 0.5	EUR 7	Mid-single digits to low-teens	<b>Life</b> Molecular Imaging
<b>Tau Morphomer<sup>®</sup> small molecules</b>	Phase 1 <sup>5</sup>	CHF 1,860	CHF 80 + USD 50 <sup>6</sup>	CHF 40	Low-double digits to mid-teens	<b>Lilly</b>
<b>Total (millions)<sup>7</sup></b>		<b>CHF ~3,311</b>	<b>CHF 155.2<sup>8</sup></b>	<b>CHF 132.4</b>		

■ Outstanding potential milestone payments exceed CHF 3 billion

(1) Disclosure limited due to confidentiality agreements with collaboration partners; (2) In millions; (3) Positron emission tomography; (4) Advanced into late-stage development in AD; (5) Phase 1 completed; (6) Equity investment; (7) Converted to CHF on date of receipt; (8) Excludes convertible note agreement of USD 50 million

# Broad and robust pipeline in neurodegenerative diseases

Driven by validated proprietary technology platforms for sustained growth

## Clinical Stage Programs

TARGET	PRODUCT CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	PARTNER
Tau	<b>ACI-35.030</b> (anti-pTau vaccine)	AD <sup>1</sup> treatment						Janssen <small>PHARMACEUTICAL COMPANY OF Johnson &amp; Johnson</small>
	<b>Semorinemab</b> (anti-Tau antibody)	AD treatment (mild-to-moderate) <sup>2</sup>					data H1	
	<b>Morphomer® Tau aggregation inhibitor</b>	Rare Tauopathies (ACI-3024)						Lilly
		AD treatment						
	<b>Tau-PET<sup>3</sup> tracer</b>	AD diagnostic						Life Molecular Imaging
		PSP <sup>4</sup> diagnostic						
Abeta	<b>Crenezumab</b> (anti-Abeta antibody)	AD prevention <sup>5</sup>						Genentech <small>A Member of the Roche Group</small>
	<b>ACI-24</b> (anti-Abeta vaccine)	AD treatment (Down syndrome <sup>6</sup> )					data in Jan and H2 <sup>9</sup>	
		AD treatment						
a-syn <sup>7</sup>	<b>ACI-7104</b> (anti-a-syn vaccine)	PD <sup>8</sup> , a-synucleinopathies					update H2	
	<b>a-syn-PET tracer</b>	a-synucleinopathies (e.g. MSA <sup>10</sup> )						

■ Biologic  
■ Small Molecule  
■ Diagnostic

(1) Alzheimer's disease; (2) Open label extension study is ongoing; (3) Positron emission tomography; (4) Progressive supranuclear palsy; (5) Prevention trial API-ADAD in Colombia; (6) Down syndrome-related Alzheimer's disease; (7) alpha-synuclein; (8) Parkinson's disease; (9) Refers to expected readouts from a Phase 1b/2 trial of an optimized formulation of ACI-24 (ACI-26.060) in patients with AD and patients with Down syndrome; (10) Multiple system atrophy

# AC Immune 2022 highlights



## Precision Medicine

- First ever live image of a-synuclein in a human brain



## Pipeline deliverables

- Progressed towards 6 clinical milestones
- First AD<sup>1</sup> prevention study readout with anti-Abeta monoclonal antibody crenezumab



## Pipeline maturation

- Initiated landmark Phase 1b/2 study of anti-Abeta vaccine in both sporadic AD and DS<sup>2</sup>
- Regulatory authorization to initiate first Phase 2 study of an anti-a-synuclein vaccine
- Partner (LMI<sup>3</sup>) initiated a Phase 3 study of Tau-PET<sup>4</sup> Tracer PI-2620



## CMC process

- Established robust CMC process for anti-Abeta vaccine for pivotal and registrational supply
- Assured supply of anti-a-synuclein vaccine for Phase 2b/3



## Maintained Financial Strength

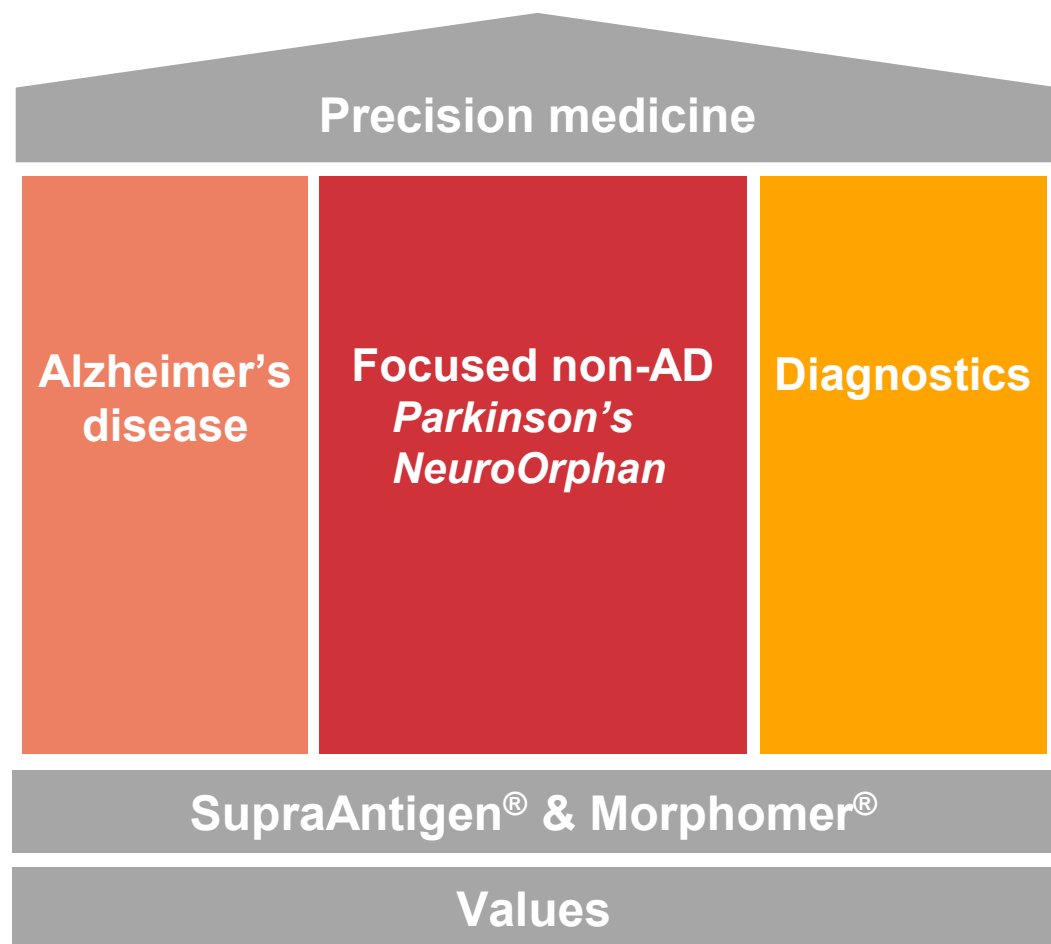
- Cash runway into Q3 2024 without consideration of potential milestone payments

(1) Alzheimer's disease; (2) Down syndrome; (3) Life Molecular Imaging; (4) Positron emission tomography



# Business Strategy 2023: advancing vaccine and non-AD<sup>1</sup> portfolio

Focus on delivering Precision Medicine to enhance value creation



## Alzheimer's disease

- Accelerate development of novel late-stage therapies with partners
- Accelerate wholly-owned optimized anti-Abeta vaccine (ACI-24.060) with parallel development in AD<sup>2</sup> and DS<sup>3</sup>

## Non-AD and NeuroOrphans

- Increase strategic focus in non-AD to Parkinson's disease
- Advance anti-a-syn<sup>4</sup> vaccine into late-stage development



## Diagnostics for precision medicine

- Advance our differentiated diagnostic pipeline for Parkinson's disease and TDP-43<sup>5</sup>-based pathologies












(1) Parkinson's disease; (2) Alzheimer's disease; (3) Down syndrome; (4) Alpha-synuclein; (5) TAR DNA-binding protein 43

# Key milestones for value creation in 2023

Multiple clinical readouts for wholly-owned vaccines

-  Clinical readouts
-  Other development events

2023

		H1	H2	
Tau	ACI-35.030 (anti-pTau vaccine)			Further development with initiation of next trial in AD <sup>1</sup> and <b>milestone payment</b>
	Semorinemab (anti-Tau antibody)			<b>Phase 2 Lauriet Trial Open Label Extension results</b>
Abeta	ACI-24.060 (anti-Abeta vaccine)			Initiation of Down syndrome cohort of Phase 1b/2 ABATE study
				IND submission to enable expansion of ABATE study to U.S.
				<b>Two interim analyses in AD – safety, immunogenicity</b>
				<b>Interim analysis in Down syndrome – safety, immunogenicity</b>
a-syn <sup>2</sup>	PET <sup>3</sup> tracer			Next clinical candidate declaration for PD <sup>4</sup>
	ACI-7104 (anti-a-syn vaccine)			<b>Phase 2 VACSYN study in PD update</b>
TDP-43 <sup>5</sup>	PET tracer			Clinical candidate declaration
	Monoclonal antibody			Candidate into preclinical development (tox)

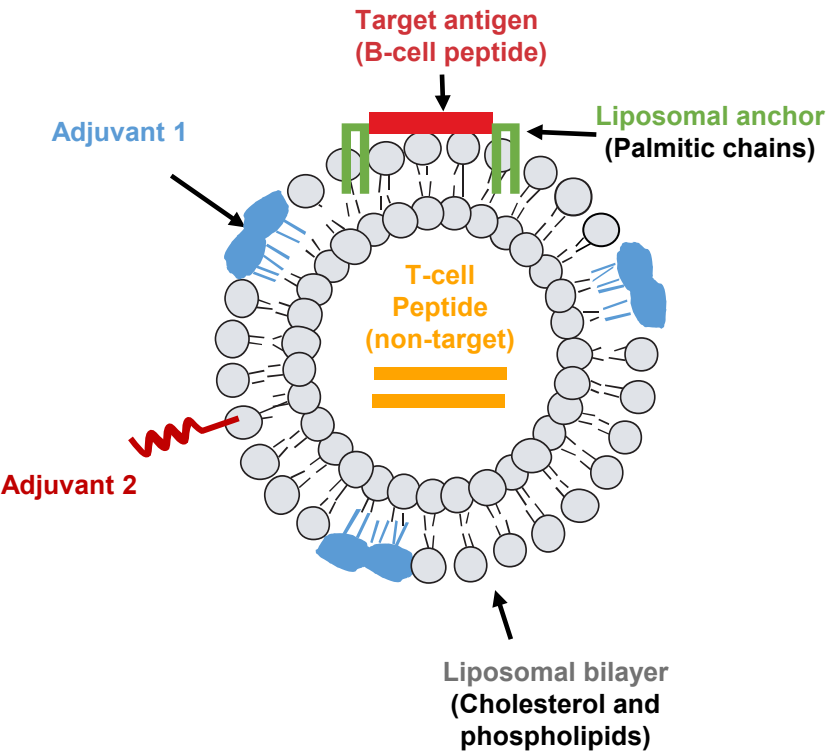
(1) Alzheimer's disease; (2) Alpha-synuclein; (3) Positron emission tomography; (4) Parkinson's disease; (5) TAR DNA-binding protein 43



Vaccine programs targeting neurodegenerative diseases

# Disruptive potential of SupraAntigen®-V

Optimized vaccines delivering superior results in neurodegenerative diseases



Generates target-specific antibody response

Safely engages target-unrelated T-cells to enhance & maintain response

## Unprecedented Clinical Performance

Immunogenicity	++++ <sup>1</sup>
Target specificity	++++ <sup>2</sup>
Conformation specificity	+++
Avidity increase over time	+++
Sustainability of response	+++
Boosting	+++
Class switching IgM to IgG	+++
Evidence of memory B cells	+++







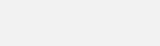

- Robust immunogenicity and strong safety demonstrated in humans
- Evidence for lasting immune response supporting a disease prevention approach

(1) 100% response after 1<sup>st</sup> injection; (2) Increases over time

# ACI-24.060: Vaccine targeting two pathological forms of Abeta

ACI-24.060 targets pyroGlu- and oligomeric Abeta, which are believed to drive AD progression

## Clinical Stage Programs

TARGET	PRODUCT CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	PARTNER
Tau	ACI-35.030 (anti-pTau vaccine)	AD <sup>1</sup> treatment	<div></div>					
	Semorinemab (anti-Tau antibody)	AD treatment (mild-to-moderate) <sup>2</sup>	<div></div> data H1					 <small>A Member of the Roche Group</small>
	Morphomer® Tau aggregation inhibitor	Rare Tauopathies (ACI-3024)	<div></div>					
		AD treatment	<div></div>					
	Tau-PET <sup>3</sup> tracer	AD diagnostic	<div></div>					
		PSP <sup>4</sup> diagnostic	<div></div>					
Abeta	Crenezumab (anti-Abeta antibody)	AD prevention <sup>5</sup>	<div></div>					 <small>A Member of the Roche Group</small>
	ACI-24 (anti-Abeta vaccine)	AD treatment (Down syndrome <sup>6</sup> )	<div></div> data in Jan. and H2 <sup>9</sup>					
		AD treatment	<div></div>					
a-syn <sup>7</sup>	ACI-7104 (anti-a-syn vaccine)	PD <sup>8</sup> , a-synucleinopathies	<div></div> update H2					
	a-syn-PET tracer	a-synucleinopathies (e.g. MSA <sup>10</sup> )	<div></div>					

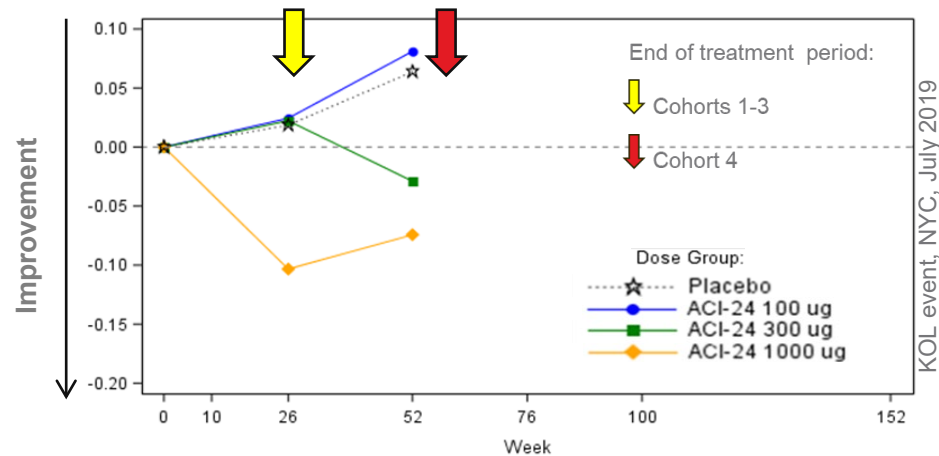
(1) Alzheimer's disease; (2) Open label extension study is ongoing; (3) Positron emission tomography; (4) Progressive supranuclear palsy; (5) Prevention trial API-ADAD in Colombia; (6) Down syndrome-related AD; (7) alpha-synuclein; (8) Parkinson's disease; (9) Refers to expected readout from a Phase 1b/2 trial of an optimized formulation of ACI-24 in patients with AD and patients with Down syndrome; (10) Multiple system atrophy



# ACI-24: Early clinical data support advancement of program

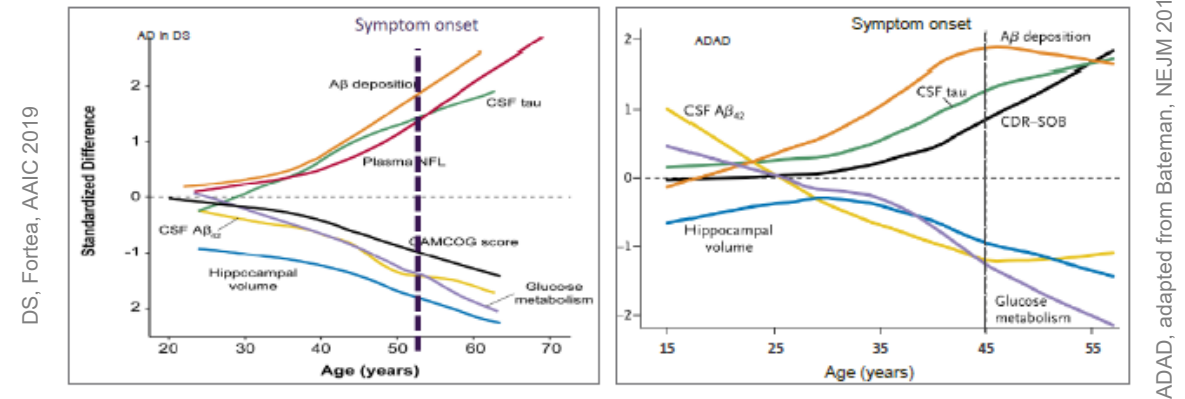
Advancing optimized formulation to the next stage of clinical development in AD<sup>2</sup> and DS<sup>3</sup>-related AD

**Abeta clearance measured by Abeta PET<sup>4</sup>**  
Change in composite summary SUVR-MCG<sup>5</sup>  
Clinical evidence of target engagement



**Alzheimer's disease in DS**

Similar pathophysiology and biomarkers in DS and ADAD<sup>6</sup>  
Virtually all individuals with DS go on to develop AD-like symptoms



1

Dose-dependent **reduction of brain Abeta accumulation** in a Phase 1b/2 trial in AD<sup>7</sup>

3

**Positive pharmacodynamic response** (increase in plasma Abeta) in a Phase 1b trial in DS

2

**Encouraging immunogenicity:** generated anti-Abeta antibodies in patients with AD & individuals with DS

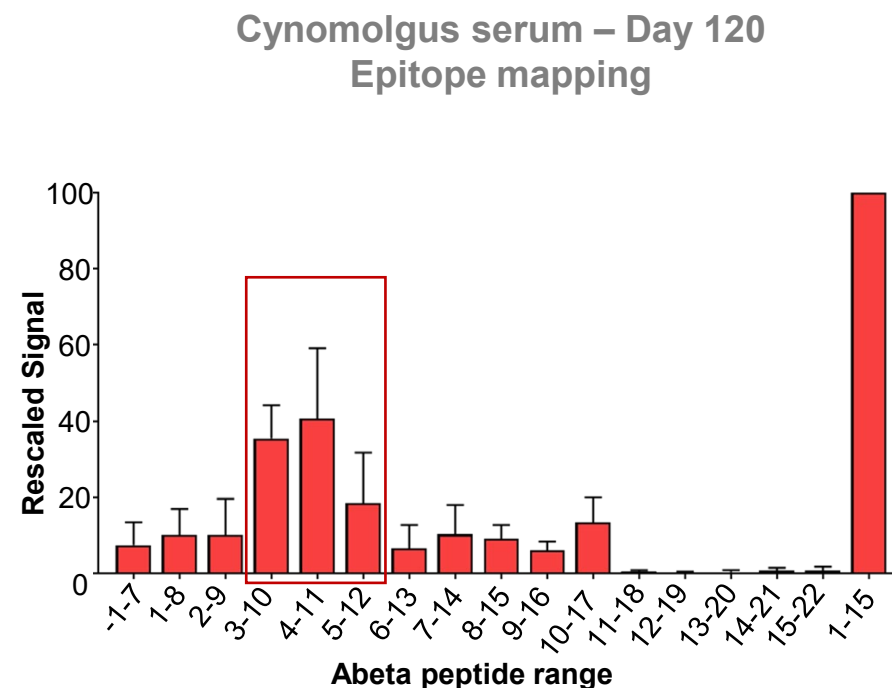
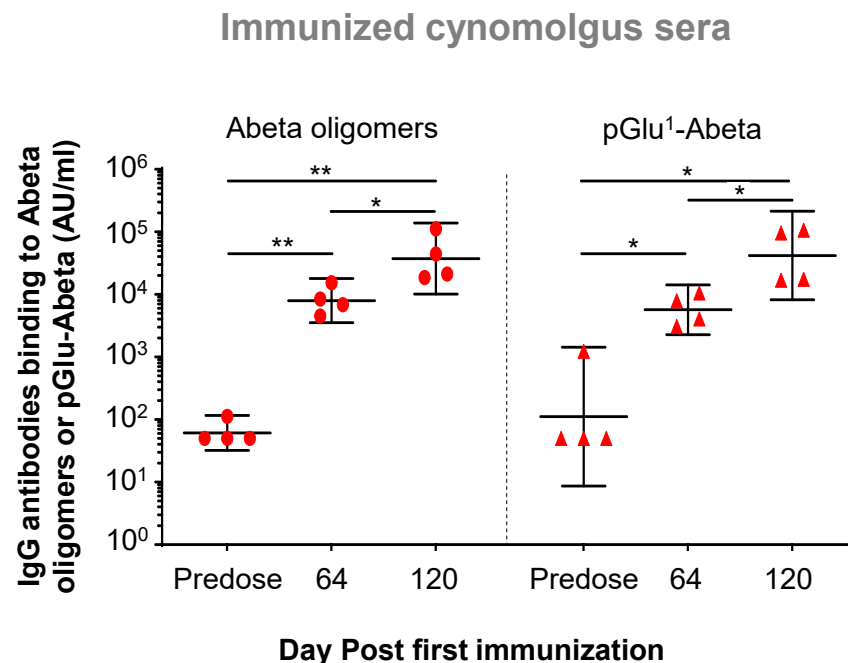
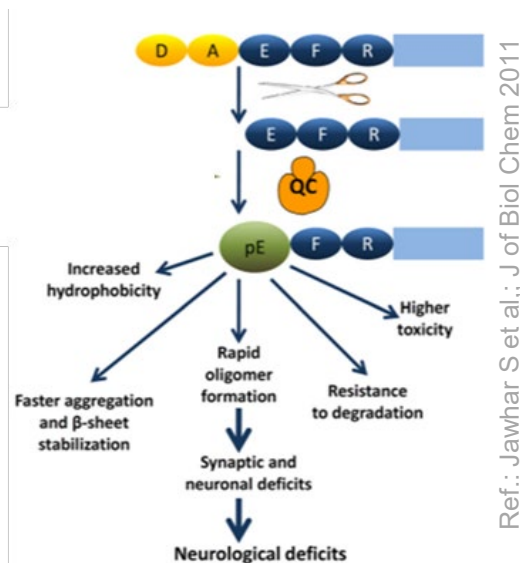
4

**Safe and well tolerated** with no treatment-related SAEs<sup>8</sup> in clinical trials in AD<sup>9</sup> and DS<sup>10</sup>

(1) Pyroglutamate Abeta; (2) Alzheimer disease; (3) Down syndrome; (4) Positron emission tomography; (5) Standardized Uptake Value Ratio-Mean Cerebellar Gray; (6) Autosomal dominant Alzheimer's disease; (7) Phase 1b/2 clinical trial in AD (trial ACI-0701); (8) Serious adverse events; (9) Phase 2 clinical trial in AD (trial ACI-1801); (10) Phase 1b clinical trial in DS (trial ACI-1301)

# ACI-24.060: Strong immune response against toxic Abeta species

Targets oligomeric- and pyroGlu-Abeta (targets of lecanemab and donanemab, respectively)

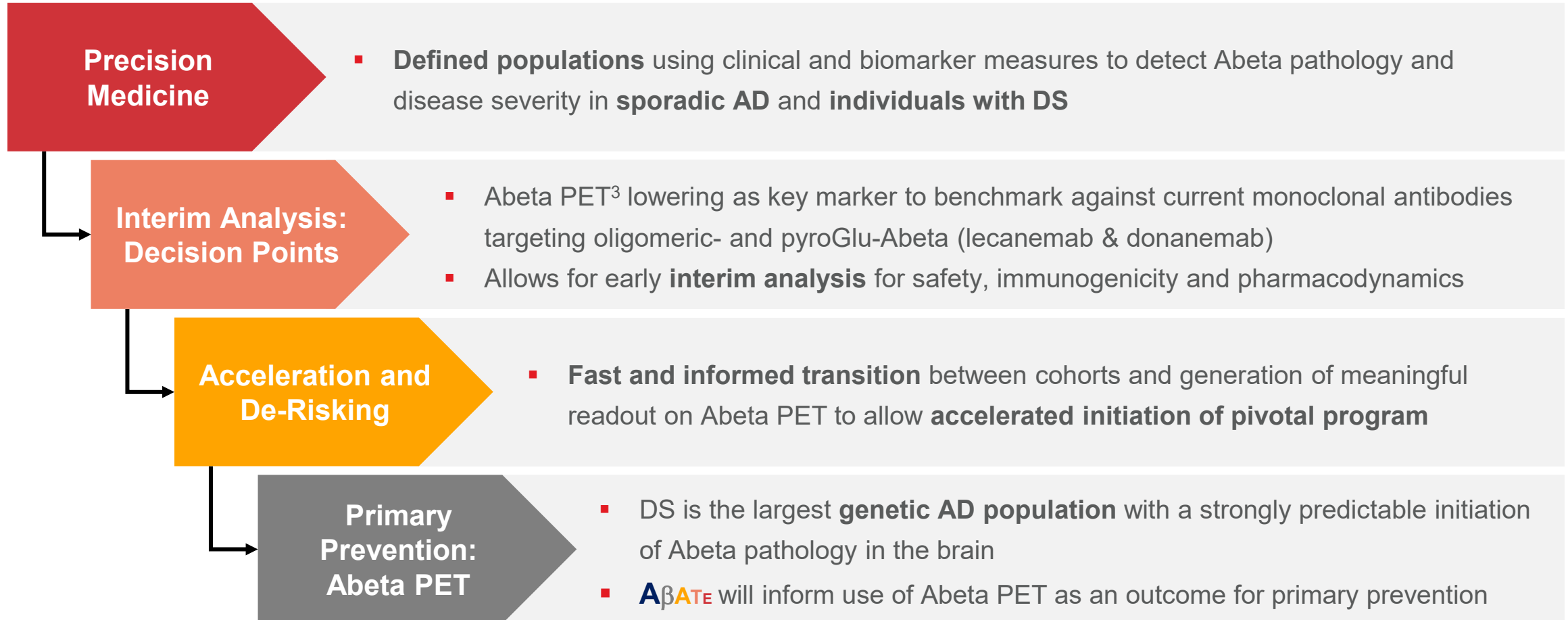


- Sustained and enhanced IgG response that binds Abeta(1-42) oligomers and pyroglutamate Abeta, the highly neurotoxic, truncated form of pathological Abeta
- The optimized vaccine represents a potential breakthrough compared to previous anti-Abeta vaccines

(1) Pyroglutamate \* p<0.05, \*\* p<0.01

# A $\beta$ AT<sub>E</sub>: Phase 1b/2 study of ACI-24.060 in AD<sup>1</sup> and AD in DS<sup>2</sup>

Innovative, translational, biomarker-based design offers key advantages



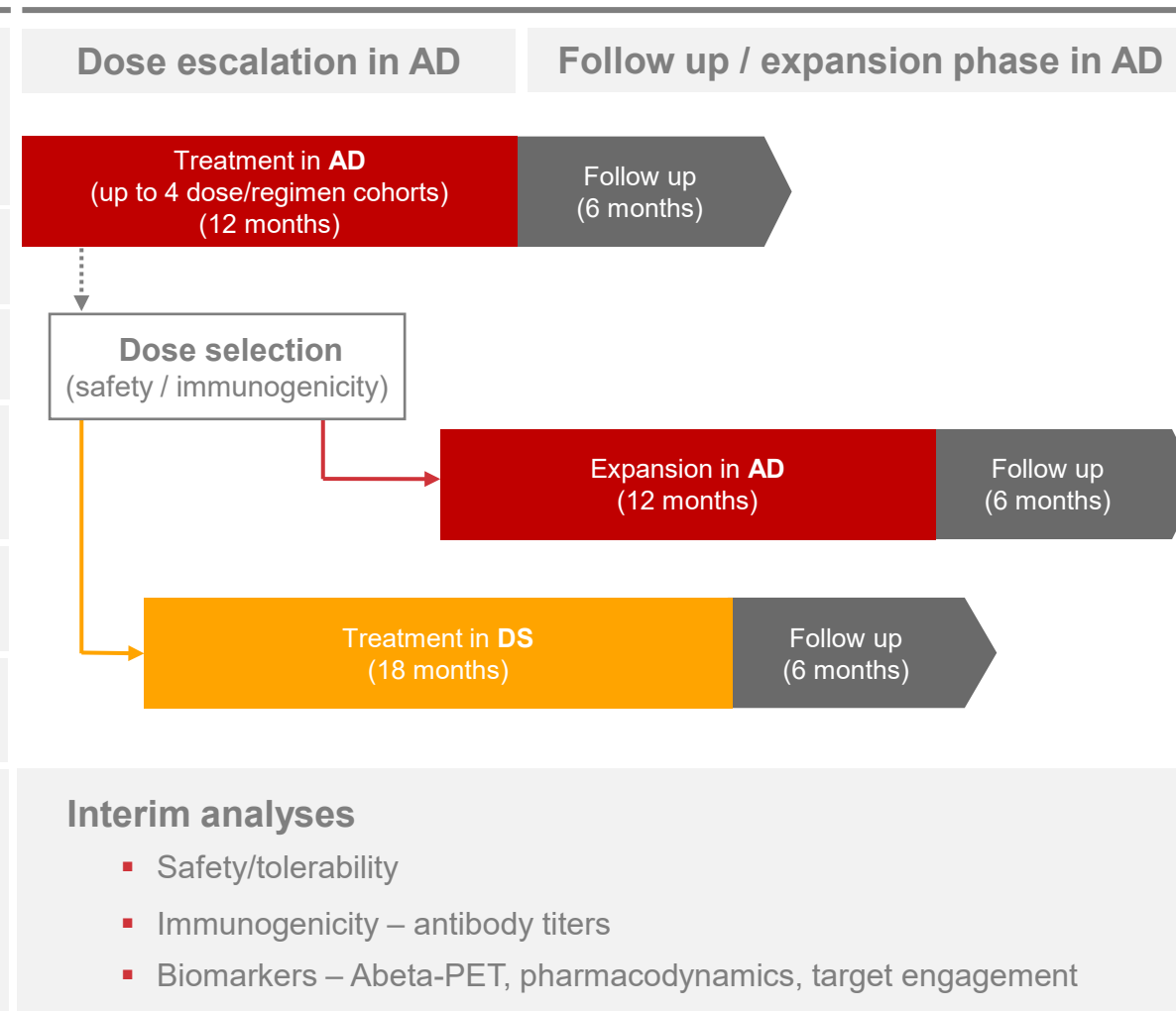
(1) Alzheimer's disease; (2) Down syndrome; (3) Positron Emission Tomography

# AβATE: Biomarker-based Phase 1b/2 study in AD<sup>1</sup> and AD in DS<sup>2</sup>

## Placebo-controlled Phase 1b/2 Study Overview

Inclusion criteria	Both	Multicenter, adaptive, placebo-controlled, dose-escalation, double-blind, randomized Phase 1b/2 study in people with: <ul style="list-style-type: none"> <li>Abeta pathology confirmed by PET<sup>3</sup> scan</li> </ul>
	AD	<ul style="list-style-type: none"> <li>Prodromal AD (CDR<sup>4</sup>-Global Score 0.5; age 50-75 years)</li> </ul>
	DS	<ul style="list-style-type: none"> <li>Non-demented people living with DS (age 35–50 years)</li> </ul>
Study design	Both	<ul style="list-style-type: none"> <li>IA<sup>5</sup> of safety/tolerability and immunogenicity</li> <li>Biomarker analyses including Abeta PET and others</li> </ul>
	AD	<ul style="list-style-type: none"> <li>Up to 4 different doses and/or dose regimens</li> <li>Expansion of one cohort to assess effect on Abeta PET</li> </ul>
	DS	<ul style="list-style-type: none"> <li>Initiation using selected dose identified in AD (based on safety/tolerability and immunogenicity)</li> </ul>
Outcome measures	Both	<ul style="list-style-type: none"> <li>Safety/tolerability</li> <li>Pharmacodynamics: Serum anti-Abeta antibody titers</li> <li>Exploratory biomarkers and clinical endpoints</li> </ul>

## Trial Schematic



(1) Alzheimer's disease; (2) Down syndrome-related AD; (3) Positron emission tomography; (4) Clinical Dementia Rating; (5) Interim analyses

# ACI-7104: Anti-a-syn<sup>1</sup> vaccine being developed for Parkinson's disease

Interim Phase 2 safety and immunogenicity data expected in H2

## Clinical Stage Programs

TARGET	PRODUCT CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	PARTNER
Tau	ACI-35.030 (anti-pTau vaccine)	AD <sup>2</sup> treatment						Janssen
	Semorinemab (anti-Tau antibody)	AD treatment (mild-to-moderate) <sup>3</sup>						Genentech <small>A Member of the Roche Group</small>
	Morphomer® Tau aggregation inhibitor	Rare Tauopathies (ACI-3024)						Lilly
		AD treatment						
	Tau-PET <sup>4</sup> tracer	AD diagnostic						Life Molecular Imaging
		PSP <sup>5</sup> diagnostic						Life Molecular Imaging
Abeta	Crenezumab (anti-Abeta antibody)	AD prevention <sup>6</sup>						Genentech <small>A Member of the Roche Group</small>
	ACI-24 (anti-Abeta vaccine)	AD treatment (Down syndrome <sup>7</sup> )						
		AD treatment						
a-syn	ACI-7104 (anti-a-syn vaccine)	PD <sup>8</sup> , a-synucleinopathies					update H2	
	a-syn-PET tracer	a-synucleinopathies (e.g. MSA <sup>9</sup> )						

(1) Alpha-synuclein; (2) Alzheimer's disease; (3) Open label extension study is ongoing; (4) Positron emission tomography; (5) Progressive supranuclear palsy; (6) Prevention trial API-ADAD in Colombia; (7) Down syndrome-related Alzheimer's disease; (8) Parkinson's disease; (9) Multiple system atrophy

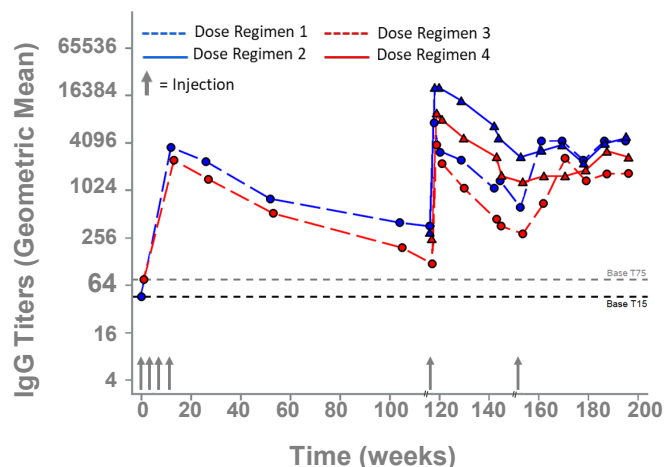


# Anti-a-syn<sup>1</sup> vaccine is clinically validated<sup>2</sup> in Parkinson's disease

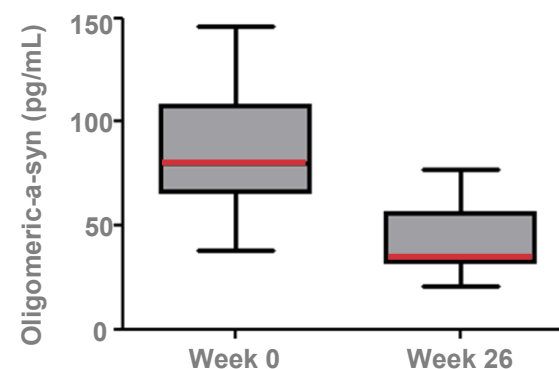
Phase 1 results in *The Lancet Neurology* support best-in-class profile

THE LANCET  
Neurology

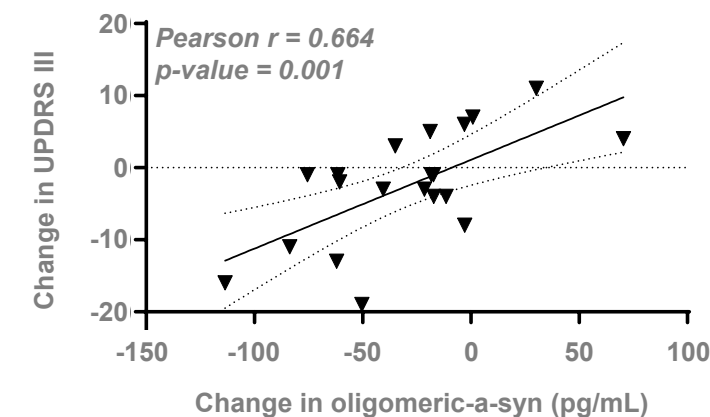
Strong and boostable antibody response



50% reduction<sup>3</sup> of pathological a-syn in CSF<sup>4</sup>



Changes<sup>5</sup> in oligo-a-syn and UPDRS III correlate



1

Safe and well tolerated with no safety concerns noted in patients followed for more than 3.5 years

3

Target engagement evidence: 50% reduction in pathological (oligomeric) a-syn in the CSF

2

Strong and boostable antibody responses

4

Signal of clinical efficacy: stabilization of UPDRS<sup>6</sup> III scores correlated with reductions in oligomeric a-syn

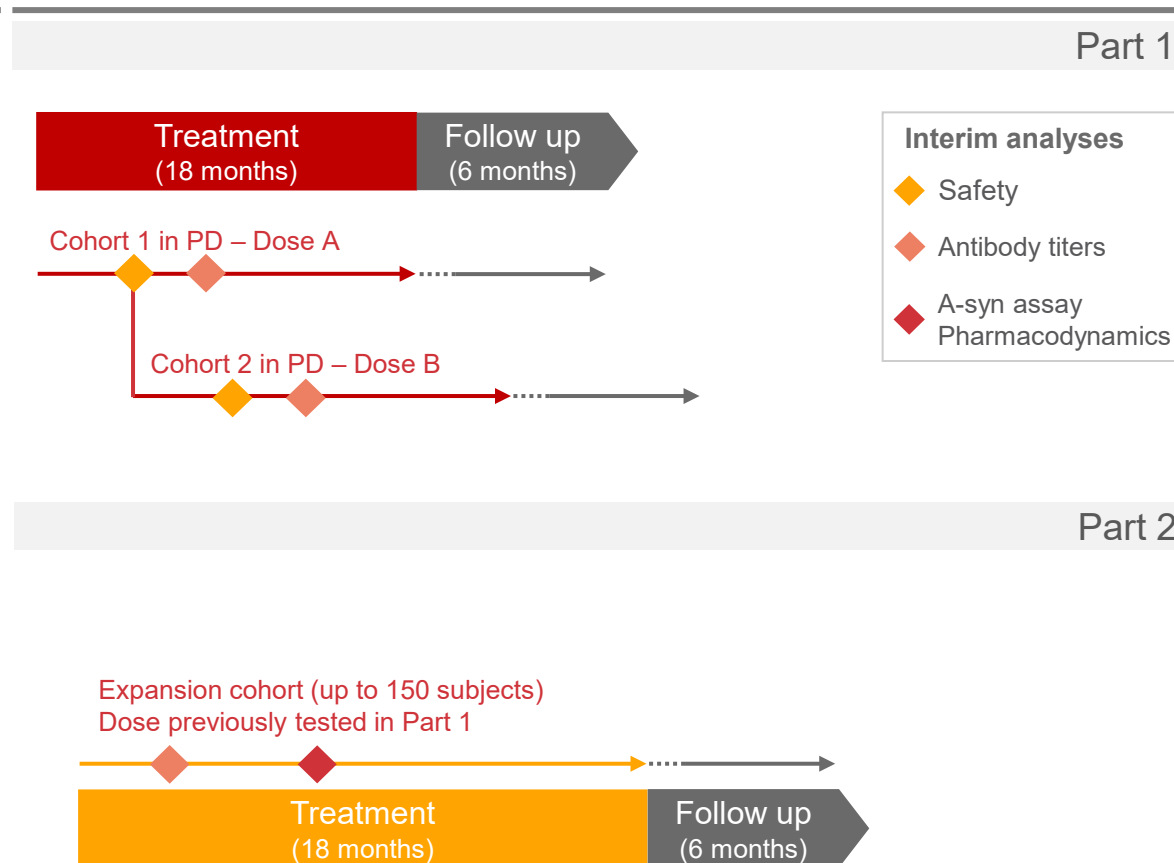
(1) alpha-synuclein; (2) Volc *et al.*, Lancet Neurol. 2020; (3) Data from 75 µg dose group; (4) Cerebrospinal fluid; (5) Change in oligomeric a-syn calculated at week 26, change in UPDRS III calculated at week 100; (6) Unified Parkinson's Disease Rating Scale

# VacSYn: an adaptive biomarker-based Phase 2 study in early PD<sup>1</sup>

## Placebo-controlled Phase 2 Study Overview

Inclusion criteria	<ul style="list-style-type: none"><li>Idiopathic PD; L-Dopa treatment (up to 300 mg per day, stable)</li><li>A diagnosis of PD for 2 years or less at screening (not demented / no cognitive impairment)</li><li>Dopaminergic deficit by DaT SPECT<sup>2</sup></li></ul>
Study design	<ul style="list-style-type: none"><li>Seamless transition<ul style="list-style-type: none"><li>All participants from Part 1 will contribute to final analysis</li></ul></li><li>Biomarker based interim analyses<ul style="list-style-type: none"><li>Early immunogenicity to tailor dose and/or dose regimen</li><li>Understand biological signal for early transition to filing</li></ul></li></ul>
Part 1 Safety & PK/PD <sup>3</sup>	<ul style="list-style-type: none"><li>Key immunogenicity measures</li><li>Measures of pathological a-syn<sup>4</sup> and a-syn aggregation (phospho-a-syn and a-syn oligomers)</li></ul>
Part 2 PoC <sup>5</sup> in early PD	<ul style="list-style-type: none"><li>Motor and Non-Motor Functioning (UPDRS<sup>6</sup> based)</li><li>Neurodegeneration of dopaminergic terminals (DaT SPECT imaging)</li><li>Digital biomarkers of motor and non-motor function</li><li>Advanced MRI (including ASL<sup>7</sup> and DTI<sup>8</sup>)</li><li>Functional and patient reported outcomes</li></ul>

## Study Dosing Schematic









(1) Parkinson's disease; (2) Dopamine Transporter Single Photon Emission Computed Tomography; (3) Pharmacokinetics and Pharmacodynamics; (4) alpha-synuclein; (5) Proof-of-concept; (6) Unified Parkinson's disease rating scale; (7) Arterial spin labeling; (8) Diffusion tensor imaging

# ACI-35.030: Anti-pTau vaccine being developed for AD<sup>1</sup>

Further clinical development in AD and milestone payment expected in H2

## Clinical Stage Programs

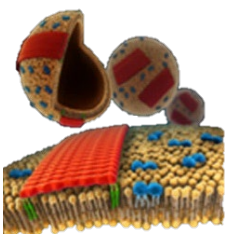
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		AD treatment						
a-syn <sup>7</sup>	<b>ACI-7104</b> (anti-a-syn vaccine)	PD <sup>8</sup> , a-synucleinopathies						
	a-syn-PET tracer	a-synucleinopathies (e.g. MSA <sup>9</sup> )						

(1) Alzheimer's disease; (2) Open label extension study is ongoing; (3) Positron emission tomography; (4) Progressive supranuclear palsy; (5) Prevention trial API-ADAD in Colombia; (6) Down syndrome-related Alzheimer's disease; (7) alpha-synuclein; (8) Parkinson's disease; (9) Multiple system atrophy

# ACI-35.030: Very encouraging interim Phase 1b/2a results in AD<sup>1</sup>

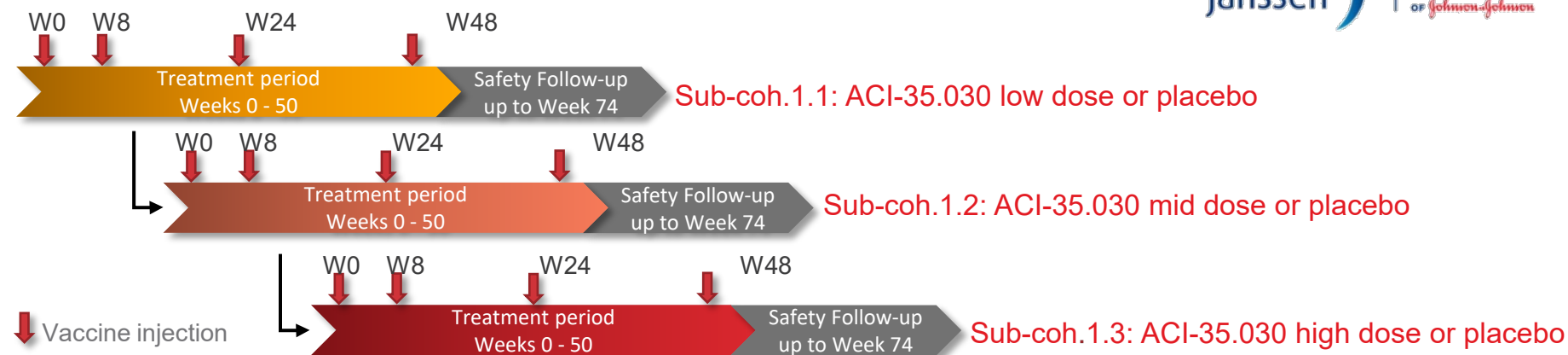


SupraAntigen<sup>®</sup>  
platform



AC-35.030

- pTau selective
- T-cell independent (Tau)
- Optimized formulation



## Interim results to date in all dose cohorts (safety/tolerability, immunogenicity):

- Anti-Tau IgG response preferentially targeting phosphorylated Tau in all participants
- 100% of participants demonstrated an anti-pTau IgG response<sup>3</sup> after the 1<sup>st</sup> injection
- Anti-pTau IgM response was also elicited in all participants
- Safe and well tolerated, no vaccine-related safety concerns observed to date

## Expansion of the second dose cohort to generate additional patient data

1

Achieved high titers of anti-pTau antibodies in 100% of participants from week 2

2

Strong safety and robust immunogenicity support advancing to late-stage development

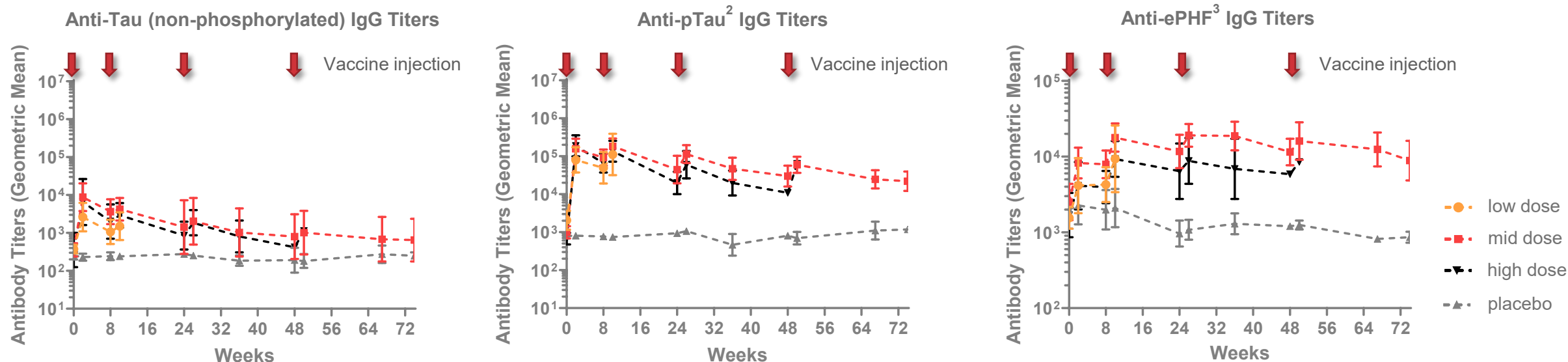
(1) Alzheimer's disease; (2) Clinical Trials in Alzheimer's Disease Conference; (3) Responders were defined as higher than a pretreatment value multiplied by a threshold factor (>~2x)

# ACI-35.030 generates a potent Ab<sup>1</sup> response against pathological Tau

ACI-35.030 generates excellent Ab responses against pTau<sup>2</sup> in an older population

## Non-Phosphorylated Tau

## Phosphorylated & Pathological Tau species



1

Strong induction of Abs preferentially targeting pTau and its aggregated form (ePHF)

2

Anti-pTau titers increased by >100-fold<sup>4</sup> from baseline in the mid-dose cohort

3

Anti-ePHF titers increased by approximately 10-fold<sup>5</sup> from baseline in the mid-dose cohort

4

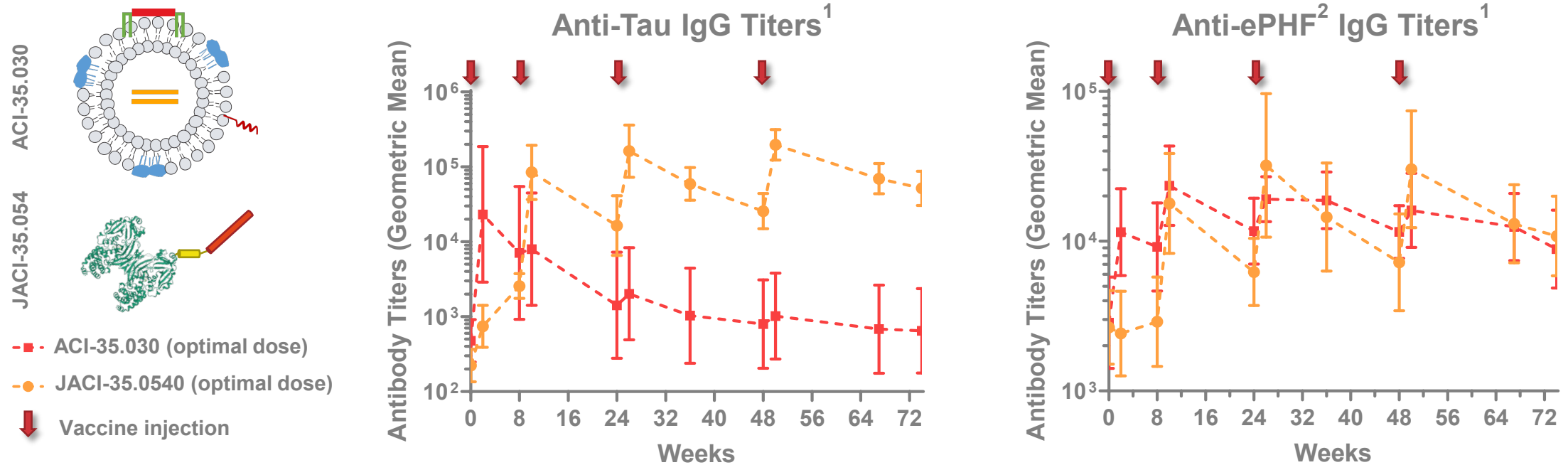
Antibody responses showed boostability following the second and third doses

(1) Antibody; (2) phosphorylated Tau; (3) Enriched paired helical filaments; (4) at Weeks 2 and 10; (5) at Week 10



# ACI-35.030 selected for further development by partner Janssen

Follows data showing ACI-35.030's superior specificity for pathological Tau vs. JACI-35.054



1

JACI-35.054 is a protein conjugate vaccine utilizing the same pTau<sup>3</sup> epitope as ACI-35.030

2

ACI-35.050 and JACI-35.054 were evaluated in parallel in the Phase 1b/2a trial in AD<sup>4</sup> patients

3

ACI-35.030 induced Ab<sup>5</sup> responses in 100% of patients after 1<sup>st</sup> injection compared to 50% with JACI-35.054

4

ACI-35.030-induced anti-ePHF Abs: longer apparent half-lives, less variability, lower peak-to-trough ratios

(1) ACI-35.030 original sub-cohort 1.2 data; (2) Enriched paired helical filaments; (3) phosphorylated Tau; (4) Alzheimer's disease; (5) Ab: Antibody



Clinical-stage monoclonal antibodies targeting neurodegenerative diseases

# Semorinemab: Anti-Tau monoclonal antibody being developed for AD<sup>1</sup>

New Phase 2 open-label extension data expected in H1

## Clinical Stage Programs

TARGET	PRODUCT CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	PARTNER
Tau	ACI-35.030 (anti-pTau vaccine)	AD treatment						Janssen
	<b>Semorinemab</b> (anti-Tau antibody)	AD treatment (mild-to-moderate) <sup>2</sup>					data H1	Genentech A Member of the Roche Group
	Morphomer® Tau aggregation inhibitor	Rare Tauopathies (ACI-3024)						Lilly
		AD treatment						
	Tau-PET <sup>3</sup> tracer	AD diagnostic						Life Molecular Imaging
		PSP <sup>4</sup> diagnostic						Life Molecular Imaging
Abeta	Crenezumab (anti-Abeta antibody)	AD prevention <sup>5</sup>						Genentech A Member of the Roche Group
	ACI-24 (anti-Abeta vaccine)	AD treatment (Down syndrome <sup>6</sup> )						
		AD treatment						
a-syn <sup>7</sup>	ACI-7104 (anti-a-syn vaccine)	PD <sup>8</sup> , a-synucleinopathies						
	a-syn-PET tracer	a-synucleinopathies (e.g. MSA <sup>9</sup> )						

(1) Alzheimer's disease; (2) Open label extension study is ongoing; (3) Positron emission tomography; (4) Progressive supranuclear palsy; (5) Prevention trial API-ADAD in Colombia; (6) Down syndrome-related Alzheimer's disease; (7) alpha-synuclein; (8) Parkinson's disease; (9) Multiple system atrophy

# Lauriet study evaluating the mAb<sup>1</sup> semorinemab in mild-to-moderate AD<sup>2</sup>

One co-primary endpoint met: first positive cognitive results for an anti-Tau mAb therapy in AD

1

Observed a statistically significant 2.89 point (42.2%) reduction in cognitive decline vs. placebo as measured by ADAS-Cog11<sup>3</sup> at week 49 (p=0.0008)

2

ADCS-ADL<sup>4</sup> co-primary endpoint and secondary efficacy endpoints (MMSE<sup>5</sup>; CDR-SB<sup>6</sup>) were not met; treatment effect on Tau PET<sup>7</sup> signal was not observed

3

Semorinemab was well tolerated with an acceptable safety profile and no unanticipated safety signals

4

ADAS-Cog11 findings were consistent at week 61<sup>9</sup>

5

Semorinemab treatment led to increased plasma Tau levels and reduced CSF<sup>10</sup> Tau species

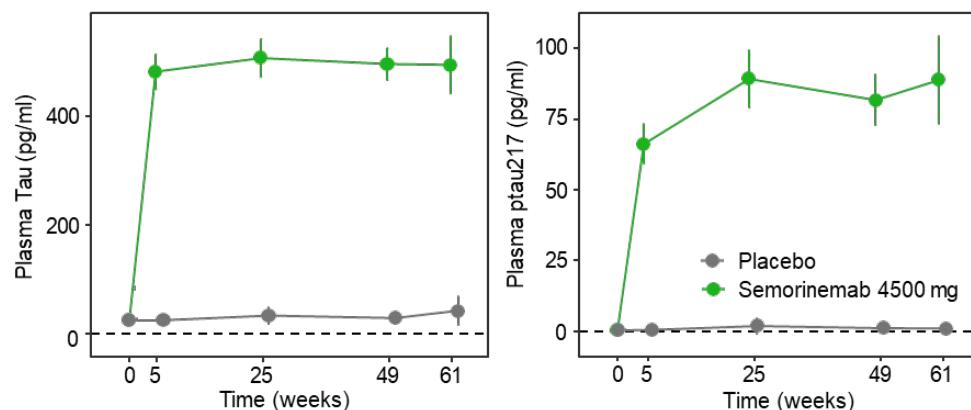
First evidence of therapeutic impact on cognition for a disease-modifying anti-Tau mAb in mild-to-moderate AD patients<sup>8</sup>

(1) Monoclonal antibody; (2) Alzheimer's disease; (3) Alzheimer's Disease Assessment Scale, Cognitive Subscale, 11-item Version; (4) Alzheimer's Disease Cooperative Study - Activities of Daily Living; (5) Mini-mental state exam; (6) Clinical Dementia Rating-Sum of the Boxes; (7) Positron emission tomography; (8) MMSE of 16-21; (9) In the subset of patients for whom the double-blind treatment period was extended to 60 weeks; (10) Cerebrospinal fluid

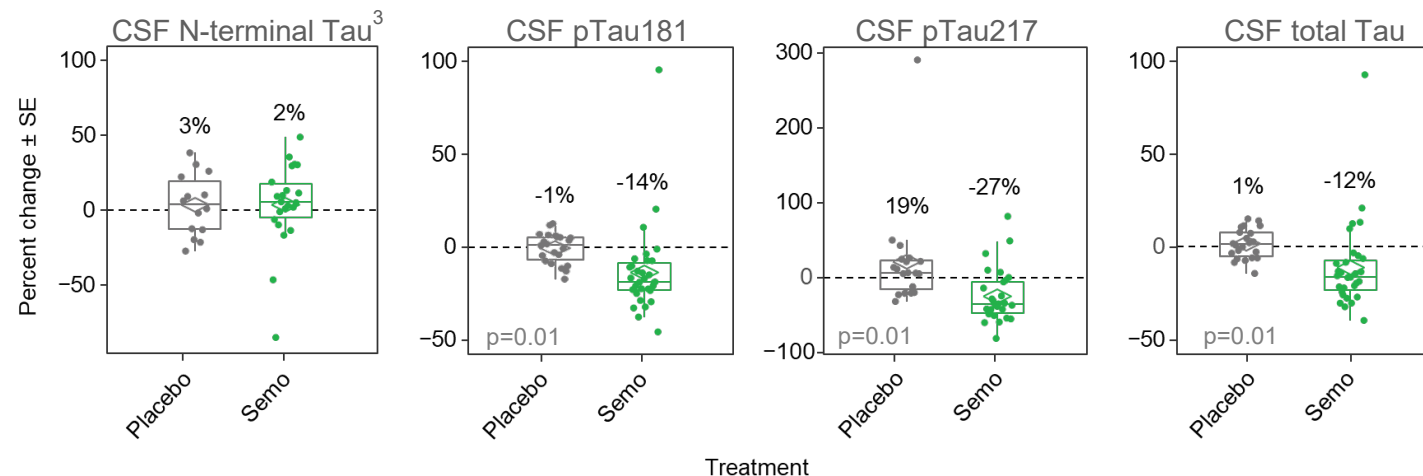
# Key findings from Lauriet Phase 2 trial of semorinemab in AD<sup>1</sup>

Data provide further support for Tau as a target in AD

Plasma pharmacodynamics from Lauriet study<sup>2</sup>



Lauriet study (mild-to-moderate AD): CSF Tau pharmacodynamics



1

Significant **semorinemab** treatment effect on cognition in a patient population where limited or no effect of anti-Abeta mAbs is observed

2

**Semorinemab** treatment effect observed in Lauriet was consistent across prespecified subgroups

3

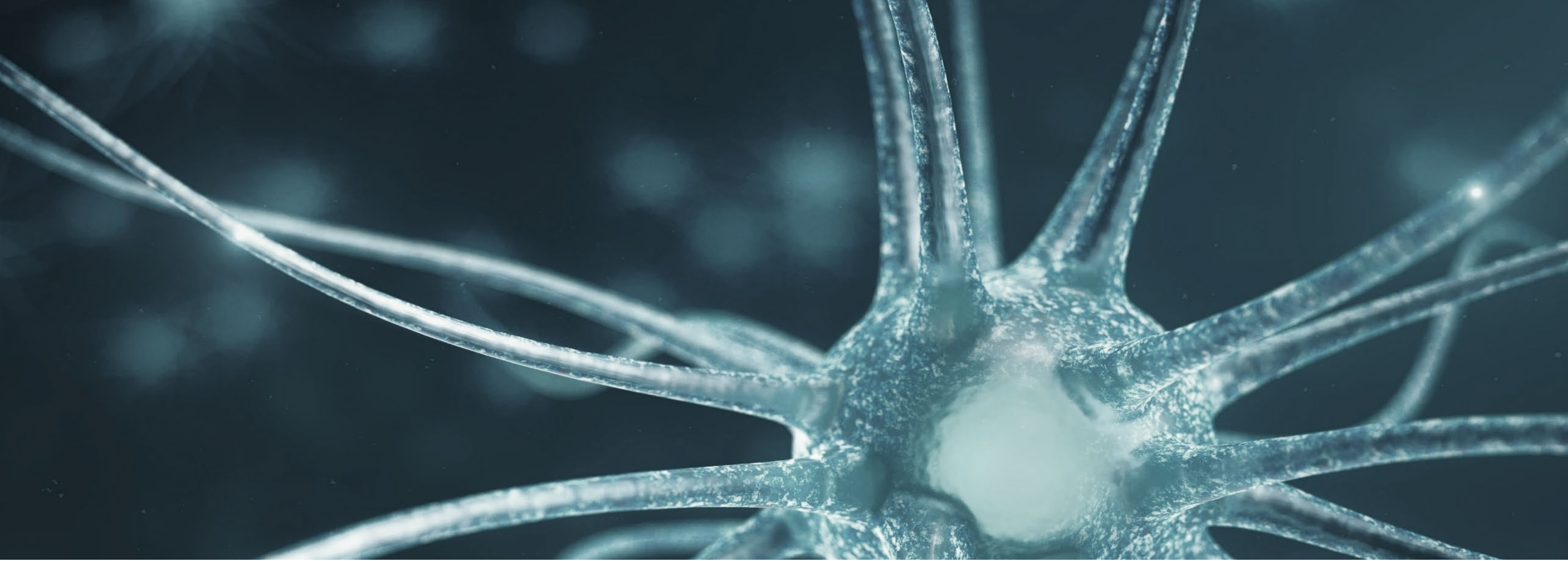
Lauriet's CSF<sup>4</sup> biomarker analyses **confirm target engagement** and show **significant reduction of pTau<sup>5</sup>**

4

Data from **Lauriet** study support the importance of soluble forms of pathological Tau in driving cognitive decline and **warrant further analysis**

(1) Alzheimer's disease; (2) Week 61 timepoint corresponds to a subset of Cohort 2 patient samples; (3) N-terminal Tau findings potentially linked to antibody-target binding; (4) Cerebrospinal fluid; (5) Phosphorylated Tau





Diagnostics to enable precision medicine

# Successfully treating neurodegeneration requires precision medicine

From a mono- to a multi-target combination approach informed by cutting edge diagnostics

## Imaging: AC Immune's Unique Capabilities



### Positron Emission Tomography

- Tau
- a-syn<sup>1</sup>
- TDP-43<sup>2</sup>

## Biofluids



- Blood / Serum
- Cerebrospinal Fluid

- a-syn
- TDP-43

## Future Technologies



In collaboration:

- Digital Health Technologies & Wearable Devices

Treating the  
right proteinopathies,  
in the right patient,  
at the right time

- Non-invasive diagnostics are critical for accurate patient selection and treatment to improve clinical outcomes
- Early and comprehensive diagnosis may eventually lead to disease prevention and combination therapy

(1) alpha-synuclein; (2) TAR DNA-binding protein 43;

# ACI-12589: a-syn PET tracer

Positive clinical proof-of-concept

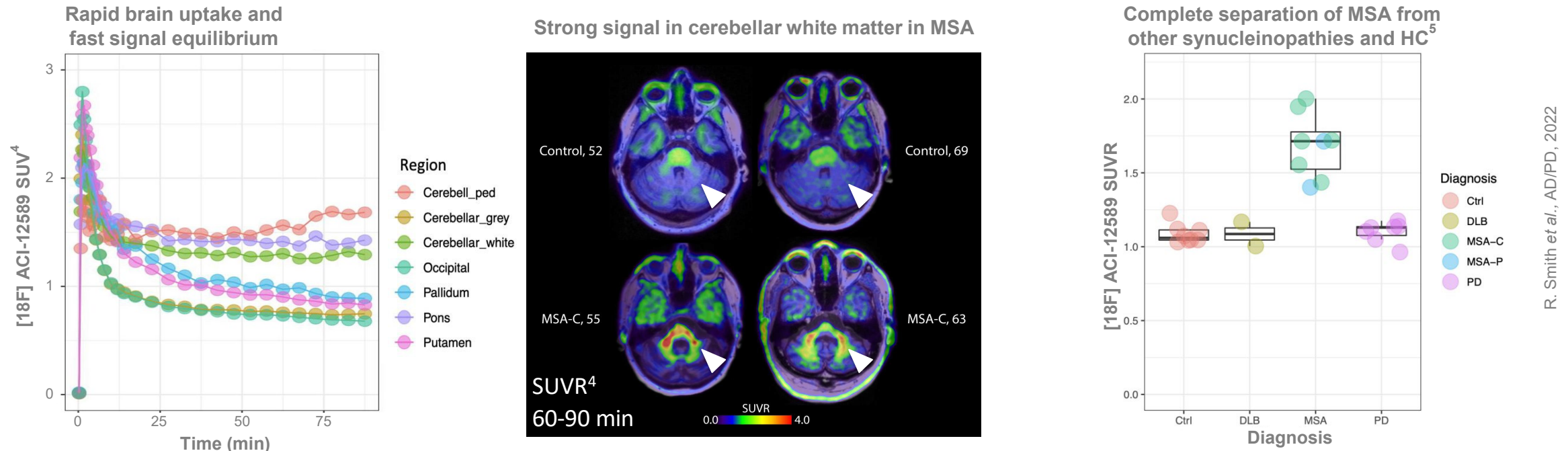
## Clinical Stage Programs

TARGET	PRODUCT CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	PARTNER
Tau	ACI-35.030 (anti-pTau vaccine)	AD <sup>1</sup> treatment						Janssen <small>Pharmaceutical Companies in Johnson &amp; Johnson</small>
	Semorinemab (anti-Tau antibody)	AD treatment (mild-to-moderate) <sup>2</sup>						
	Morphomer® Tau aggregation inhibitor	Rare Tauopathies (ACI-3024)						Lilly
		AD treatment						
	Tau-PET <sup>3</sup> tracer	AD diagnostic						Life Molecular Imaging
		PSP <sup>4</sup> diagnostic						
Abeta	Crenezumab (anti-Abeta antibody)	AD prevention <sup>5</sup>						Genentech <small>A Member of the Roche Group</small>
	ACI-24 (anti-Abeta vaccine)	AD treatment (Down syndrome <sup>6</sup> )						
		AD treatment						
a-syn <sup>7</sup>	ACI-7104 (anti-a-syn vaccine)	PD <sup>8</sup> , a-synucleinopathies						
	<b>a-syn-PET tracer</b>	<b>a-synucleinopathies (e.g. MSA<sup>9</sup>)</b>						

(1) Alzheimer's disease; (2) Open label extension study is ongoing; (3) Positron emission tomography; (4) Progressive supranuclear palsy; (5) Prevention trial API-ADAD in Colombia; (6) Down syndrome-related Alzheimer's disease; (7) alpha-synuclein; (8) Parkinson's disease; (9) Multiple system atrophy

# ACI-12589: Positive clinical proof-of-concept for an a-syn<sup>1</sup>-PET<sup>2</sup> tracer

First-in-class diagnostic for MSA<sup>3</sup> and monitoring a-syn drug target engagement





R. Smith et al., AD/PD, 2022












(1) alpha-synuclein; (2) Positron emission tomography; (3) Multiple system atrophy; (4) Standardized uptake value; (5) Healthy controls; (6) Monoamine oxidase B; (7) Parkinson's disease

# Key milestones for value creation in 2023

Multiple clinical readouts for wholly-owned vaccines

-  Clinical readouts
-  Other development events

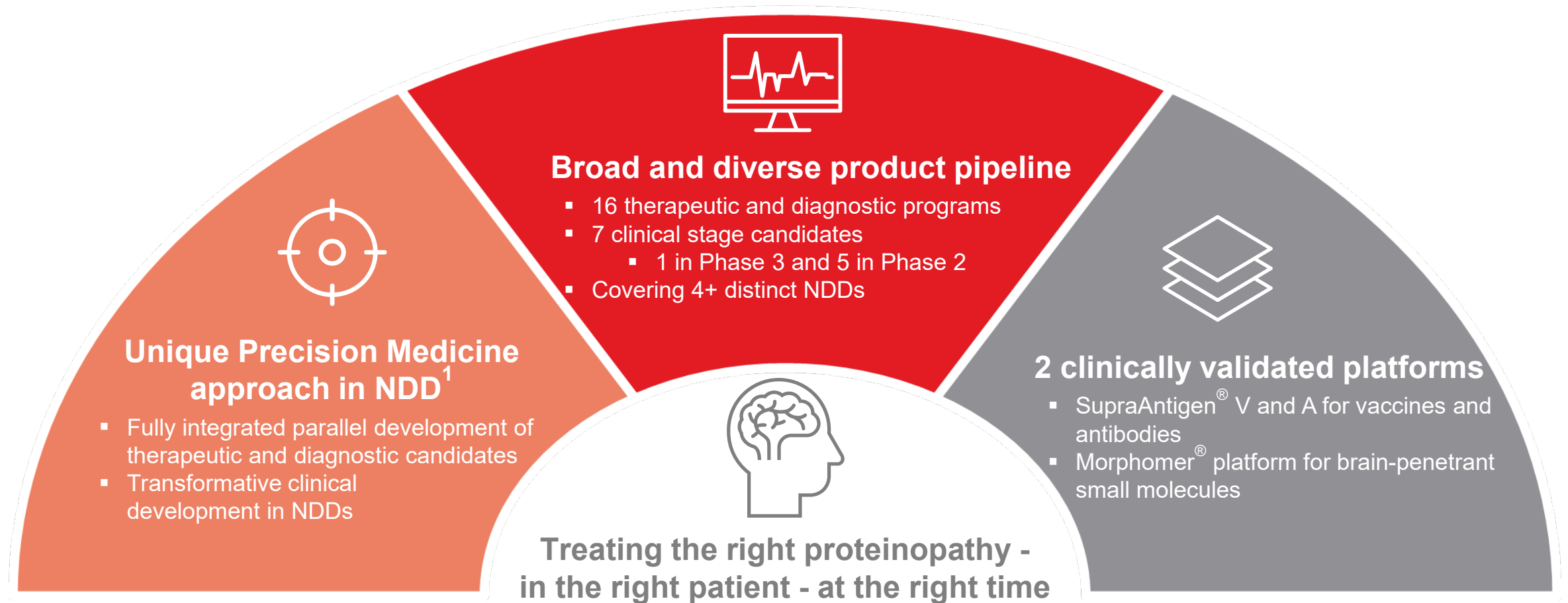
2023

		H1	H2	
Tau	ACI-35.030 (anti-pTau vaccine)			Further development with initiation of next trial in AD <sup>1</sup> and <b>milestone payment</b>
	Semorinemab (anti-Tau antibody)			<b>Phase 2 Lauriet Trial Open Label Extension results</b>
Abeta	ACI-24.060 (anti-Abeta vaccine)			Initiation of Down syndrome cohort of Phase 1b/2 ABATE study
				IND submission to enable expansion of ABATE study to U.S.
				<b>Two interim analyses in AD – safety, immunogenicity</b>
				<b>Interim analysis in Down syndrome – safety, immunogenicity</b>
a-syn <sup>2</sup>	PET <sup>3</sup> tracer			Next clinical candidate declaration for PD <sup>4</sup>
	ACI-7104 (anti-a-syn vaccine)			<b>Phase 2 VACSYN study in PD update</b>
TDP-43 <sup>5</sup>	PET tracer			Clinical candidate declaration
	Monoclonal antibody			Candidate into preclinical development (tox)

(1) Alzheimer's disease; (2) Alpha-synuclein; (3) Positron emission tomography; (4) Parkinson's disease; (5) TAR DNA-binding protein 43

# Summary: AC Immune Today


Differentiated leadership through Precision Medicine



(1) Neurodegenerative diseases



# AC Immune: Pioneering science and precision medicine



Shifting the treatment paradigm for  
neurodegenerative disease towards  
precision medicine and disease prevention










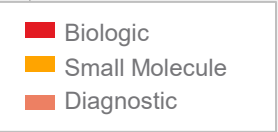
Supplementary information

# Broad and robust pipeline in neurodegenerative diseases

Diversification into non-AD<sup>1</sup> and non-CNS<sup>2</sup> diseases

## Novel Targets Pipeline

TARGET	PRODUCT CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2
a-synuclein (a-syn)	Anti-a-syn antibody	PD, NeuroOrphan				
	Morphomer® a-syn (a-syn inhibitor)	PD, a-synucleinopathies				
TDP-43	Anti-TDP-43 <sup>5</sup> antibody	LATE <sup>6</sup> , NeuroOrphan				
	TDP-43-PET tracer	TDP-43-opathies				
Inflammasome	Anti-NLRP3 <sup>7</sup> -ASC <sup>8</sup> antibody	NeuroOrphan				
	Morphomer® NLRP3-ASC	Non-CNS				
	Morphomer® NLRP3-ASC	NeuroOrphan; non-CNS				



■ Biologic  
■ Small Molecule  
■ Diagnostic

(1) Alzheimer's disease; (2) Central nervous system; (3) Parkinson's disease; (4) Positron emission tomography; (5) TAR DNA-binding protein 43; (6) Limbic-predominant age-related TDP-43 encephalopathy; (7) (NOD)-like receptor protein 3; (8) Apoptosis-associated speck-like protein containing a CARD, also PYCARD

# Crenezumab: Monoclonal anti-Abeta antibody being developed for AD<sup>1</sup>

Top line results from foremost Alzheimer prevention trial reported in H1 2022

## Clinical Stage Programs

TARGET	PRODUCT CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2	PHASE 3	PARTNER
Tau	ACI-35.030 (anti-pTau vaccine)	AD <sup>1</sup> treatment						Janssen <small>Pharmaceutical Companies a Johnson &amp; Johnson</small>
	Semorinemab (anti-Tau antibody)	AD treatment (mild-to-moderate) <sup>2</sup>						
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		AD treatment						
	Tau-PET <sup>3</sup> tracer	AD diagnostic						Life Molecular Imaging
		PSP <sup>4</sup> diagnostic						
Abeta	<b>Crenezumab</b> (anti-Abeta antibody)	AD prevention <sup>5</sup>						Genentech <small>A Member of the Roche Group</small>
	ACI-24 (anti-Abeta vaccine)	AD treatment (Down syndrome <sup>6</sup> )						
		AD treatment						
a-syn <sup>7</sup>	ACI-7104 (anti-a-syn vaccine)	PD <sup>8</sup> , a-synucleinopathies						
	A-syn-PET tracer	a-synucleinopathies (e.g. MSA <sup>9</sup> )						

(1) Alzheimer's disease; (2) Open label extension study is ongoing; (3) Positron emission tomography; (4) Progressive supranuclear palsy; (5) Prevention trial API-ADAD in Colombia; (6) Down syndrome-related Alzheimer's disease; (7) alpha-synuclein; (8) Parkinson's disease; (9) Multiple system atrophy

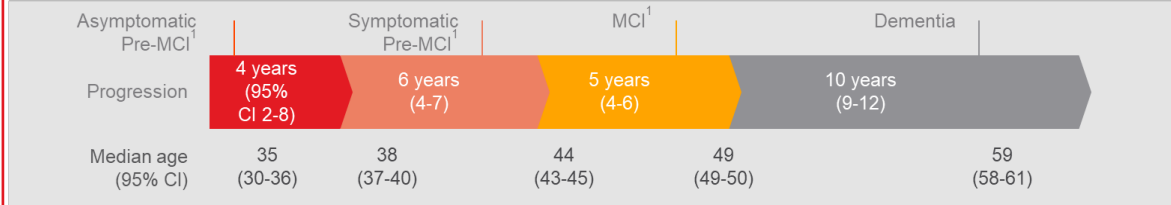
# Crenezumab: Alzheimer Prevention Initiative (API-ADAD<sup>1</sup>) trial

## Landmark Alzheimer prevention trial

### Patient population

- Colombian family clan with Paises mutation leading to Abeta accumulation and early onset AD<sup>2</sup>
- Largest autosomal-dominant AD cohort
- Nearly 100% certainty of disease development due to a PSEN-1<sup>3</sup> gene mutation
- Unique opportunity to study prevention and treatment in defined population

### Importance of population



nature  
International journal of science

NEWS • 27 MARCH 2018

### Pioneering Alzheimer's study in Colombia zeroes in on enigmatic protein

Researchers tracking a genetic mutation that causes an early-onset form of the disease hope to uncover new drug targets.

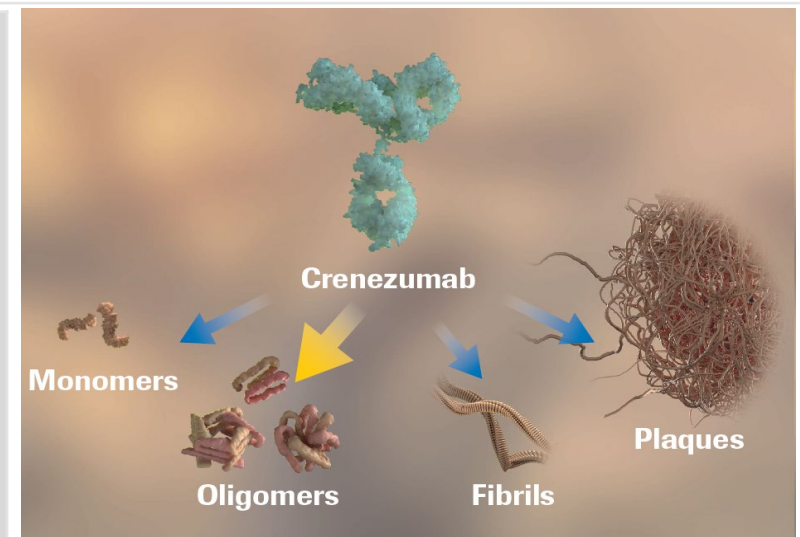


### Study design

#### Phase 2 double-blind, placebo-controlled study

- 252 subjects were enrolled with MMSE  $\geq 24^x$  or  $>26^y$
- 169 mutation carriers randomized equally (1:1) to crenezumab or placebo; 83 non-carriers received a placebo
- Two primary cognitive endpoints measuring rate of change over at least 260 weeks (and up to approx. 416 weeks);
  - API-ADAD Composite Cognitive Test Total Score
  - Free and Cued Selective Reminding Test (FCSRT)
- Secondary endpoints: Safety, time to MCI<sup>4</sup>; biomarkers (Abeta PET<sup>5</sup>, FDG<sup>6</sup> PET, Tau PET, CSF<sup>7</sup>, and blood-biomarkers)
- Study started December 2013

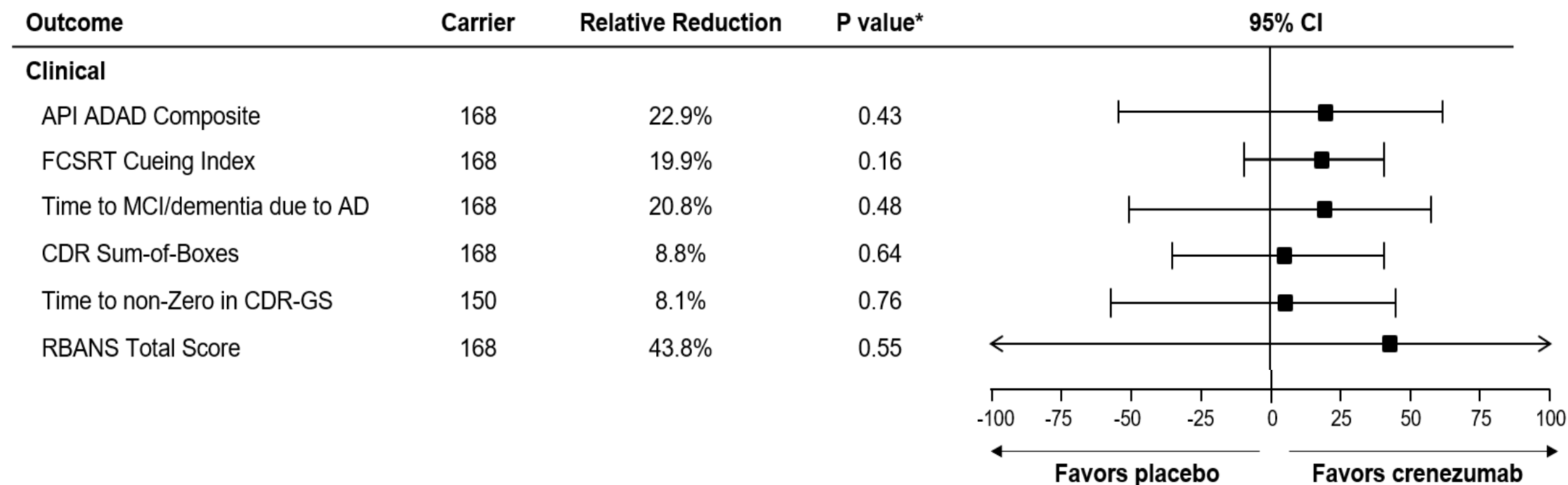
### Mechanism targeting Abeta oligomers



Note: X: less than 9 years of education; Y: more than 9 years of education; (1) Alzheimer's Prevention Initiative – Autosomal-Dominant Alzheimer's disease; (2) Alzheimer's disease; (3) Presenilin-1; (4) Mild cognitive impairment; (5) Positron emission tomography; (6) Fluorodeoxyglucose; (7) Cerebrospinal fluid

# API<sup>1</sup> study of crenezumab in familial AD<sup>2</sup>: Clinical endpoints

Consistent numerical differences favor crenezumab vs. placebo, but are not statistically significant



Presented at the 2022 Alzheimer's Association International Conference (AAIC)

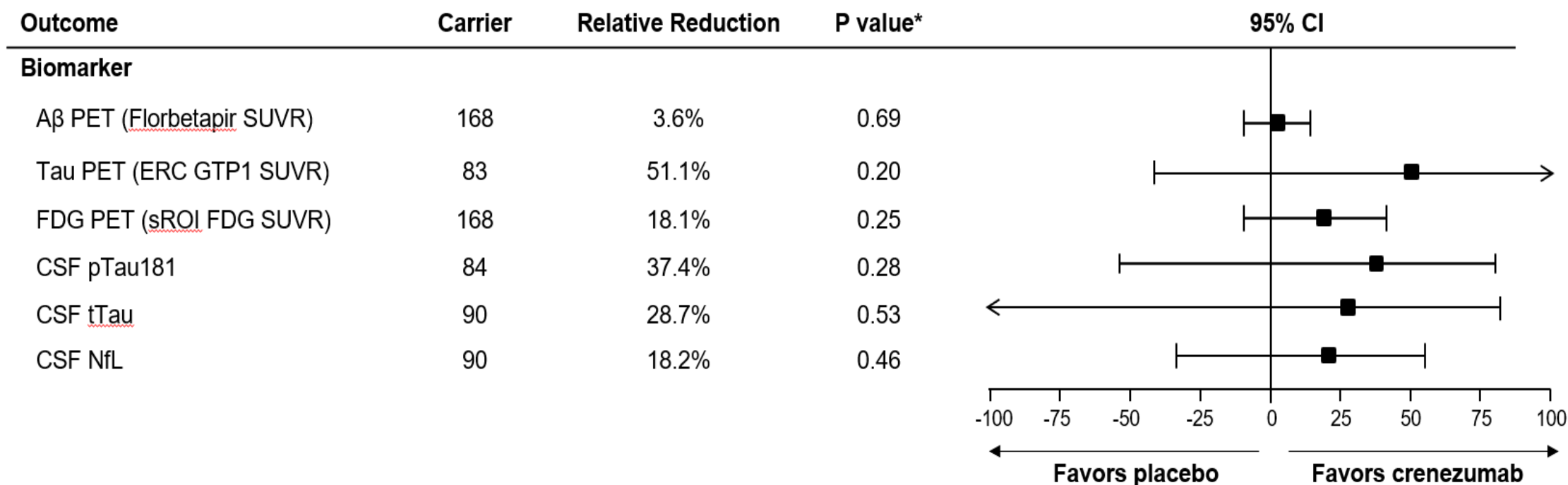
■ The consistent direction of changes on all clinical outcomes supports an effect of crenezumab

(1) Alzheimer's Prevention Initiative; (2) Alzheimer's disease



# API<sup>1</sup> study of crenezumab in familial AD<sup>2</sup>: Biomarker endpoints

Consistent numerical differences favor crenezumab vs. placebo, but are not statistically significant



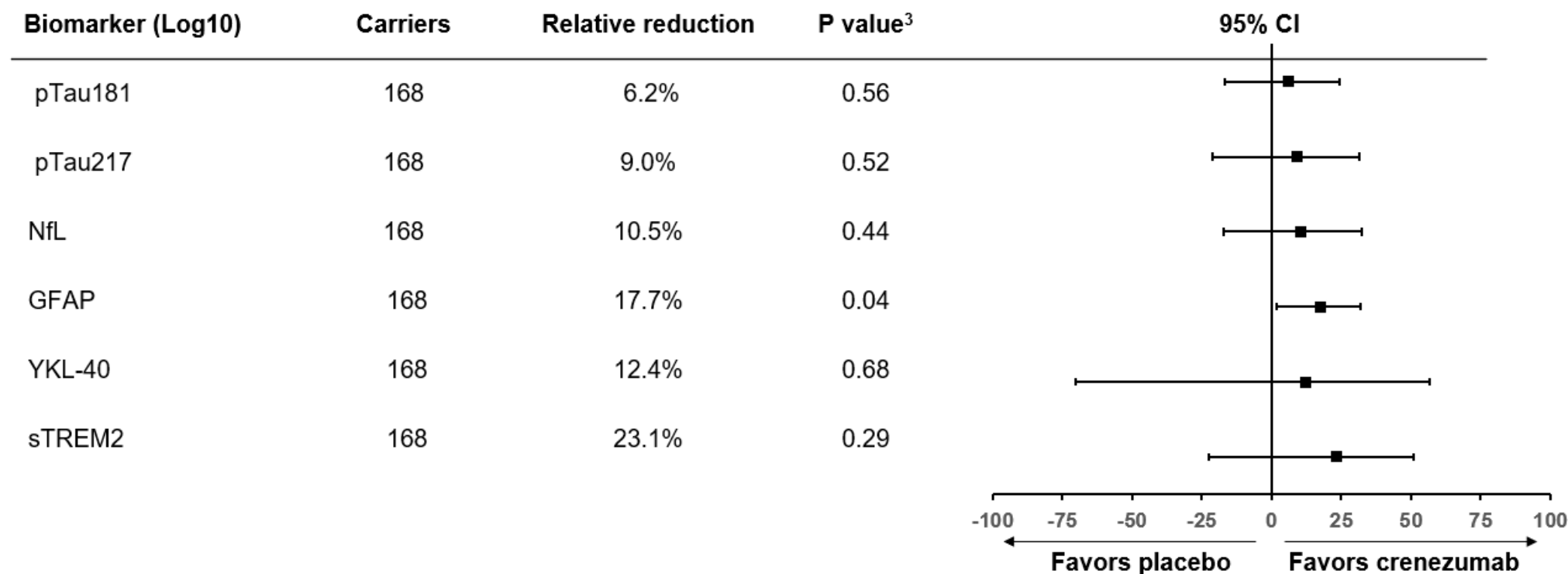
Presented at the 2022 Alzheimer's Association International Conference (AAIC)

- Consistent numerical differences on biomarker measures correlate with clinical endpoint observations
- Relative 51.1% reduction in Tau-PET (ERC<sup>3</sup>) is notable and aligned with all other Tau markers

(1) Alzheimer's Prevention Initiative; (2) Alzheimer's disease; (3) entorhinal cortex

# API<sup>1</sup> study of crenezumab in familial AD<sup>2</sup>: Plasma biomarker endpoints

Consistent numerical differences favor crenezumab vs. placebo, are not statistically significant



■ Consistent numerical differences on biomarker measures correlate with clinical endpoint observations

(1) Alzheimer's Prevention Initiative; (2) Alzheimer's disease; (3) P values are uncorrected for multiple comparisons

# API<sup>1</sup> study evaluating crenezumab in familial AD<sup>2</sup>

Numerical differences favoring crenezumab vs. placebo observed, which were not statistically significant

1

Crenezumab **did not statistically significantly slow or prevent cognitive decline** in the API study.

2

Numerical differences favoring crenezumab **observed** across co-primary, multiple secondary, and exploratory endpoints.

3

Crenezumab was **generally well tolerated**, with no new safety issues or cases of ARIA-E<sup>3</sup> observed

4

Patients from the trial can **continue receiving crenezumab** in a blinded extension of the study while **Roche further analyzes data**.

5

Study had **limited statistical power** to determine if treatment with crenezumab at the optimal dose would have a clinical benefit



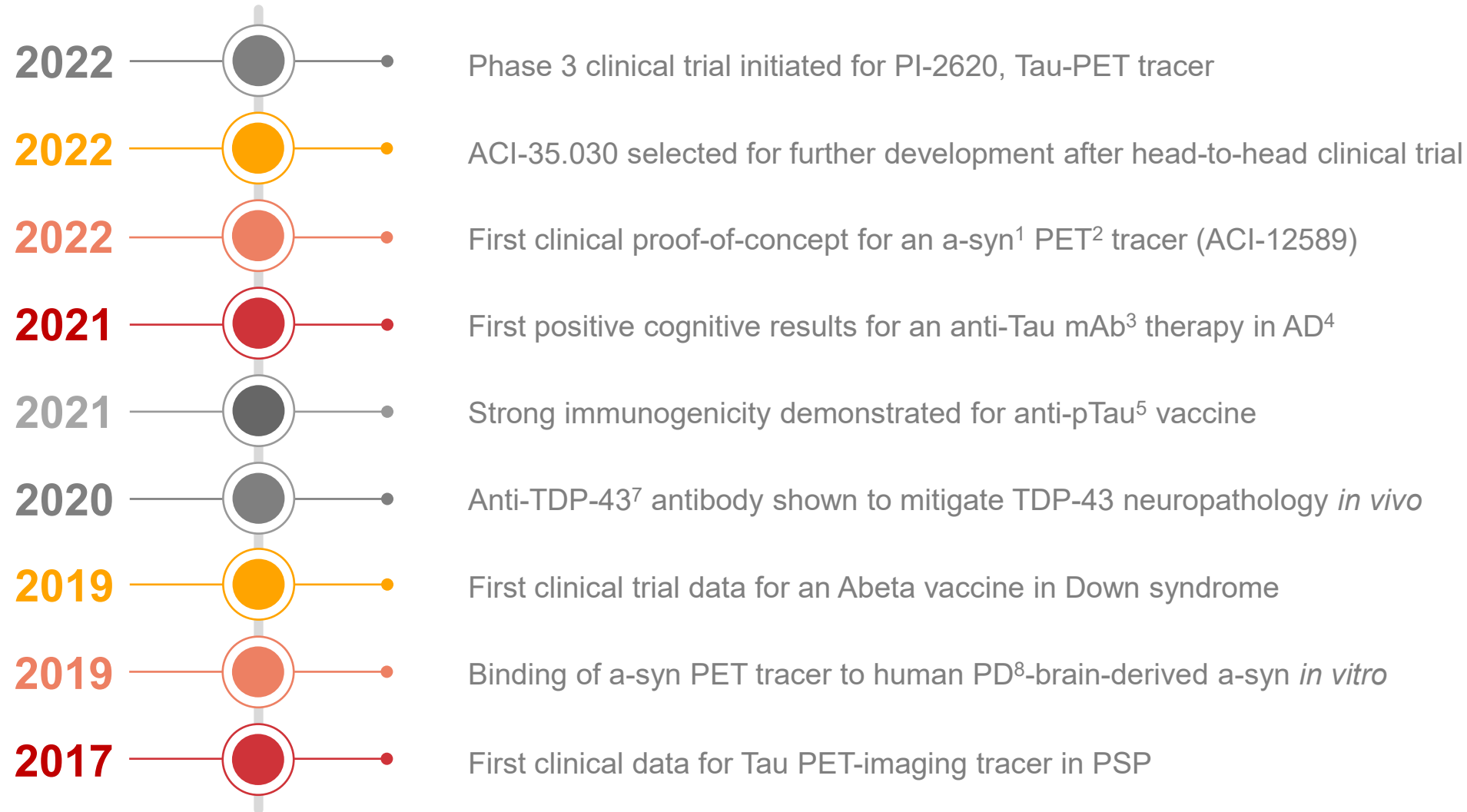
THE VANISHING MIND

## Alzheimer's Stalks an Extended Family in Colombia

New York Times, June 2010

(1) Alzheimer's Prevention Initiative; (2) Alzheimer's disease; (3) Amyloid-related imaging abnormalities refers to cerebral edema; (4) Alzheimer's Association International Conference

# ACIU's leadership in neurodegenerative disease 2017 - 2022



**Life** Molecular Imaging

**janssen**  
PHARMACEUTICAL COMPANY  
OF JECHEUN-OF-JOHNSON

**Genentech**  
A Member of the Roche Group

**janssen**  
PHARMACEUTICAL COMPANY  
OF JECHEUN-OF-JOHNSON

**Life** Molecular Imaging

(1) alpha-synuclein; (2) Positron emission tomography; (3) Monoclonal antibody; (4) Alzheimer's disease; (5) Phosphorylated Tau; (6) Progressive supranuclear palsy; (7) TAR DNA binding protein-43; (8) Parkinson's disease